

Tài nguyên tri thức của học sinh tiểu học HMông: Một nghiên cứu tình huống trong thực hành giảng dạy của giáo viên Tiểu học là người dân tộc Kinh

HMông students' funds of knowledge:

A case study of Kinh primary school teachers' practices

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STATEMENT OF AUTHENTICATION

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.



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TABLE OF CONTENTS

Acknowledgements.....	i
Statement of Authentication.....	ii
Declarations	iii
TABLE OF CONTENTS.....	iv
List of Tables.....	x
List of Figures	xi
List of Abbreviations.....	xii
Abstract	xiii
CHAPTER 1. KINH PRIMARY TEACHERS' CURRICULUM USES OF HÔNG STUDENTS' FUNDS OF KNOWLEDGE	1
1.1. Introduction to the research problem	1
1.2. Aims of this research.....	4
1.3. Research questions.....	4
1.4. Rationale for this study.....	5
1.4.1. The historical context of the education system in Việt Nam	5
1.4.2. The education system in Việt Nam.....	7
1.4.3. The Ministry of Education in Việt Nam	8
1.4.4. Education in contemporary Việt Nam	9
1.4.5. Funds of knowledge.....	11
1.4.6. Questionable assumptions about funds of knowledge	13

1.5. Context for this study	14
1.6. Professional relevance of this study of funds of knowledge	16
1.6.1. Researcher’s funds of knowledge	16
1.6.2. A story about Huong, a Kinh teacher, and Su, a HMông student.....	18
1.7. Significance and innovativeness of this study	20
1.8. Delimitations of this study	21
1.9. Structure of thesis	22
CHAPTER 2. PEDAGOGIC CHALLENGES IN TEACHING ETHNIC MINORITY STUDENTS IN VIỆT NAM	24
2.1. Introduction.....	24
2.2. Literature review methodology: A structured literature search	24
2.3. Issues relating to teaching ethnic minority students in Việt Nam	29
2.3.1. National school curricula lack ethnic minority students’ funds of knowledge.....	29
2.3.2. School environment lacks minority students’ fund of language knowledge	31
2.3.3. Lack of culturally-responsive pedagogy.....	33
2.3.4. Lack of adequate teacher education and lack of HMông teachers.....	34
2.3.5. Deficit thinking about ethnic minority students	37
2.4. Educational policies and programs for ethnic minorities in Việt Nam	41
2.4.1. Educational policy context for ethnic minority students in Việt Nam.....	41
2.4.2. Educational programs for ethnic minority student education in Việt Nam	43

2.5. Difficulties arising from policies and programs for ethnic minority students.....	48
2.6. Evaluation of the literature	50
2.7. Conclusion	52
CHAPTER 3. CONCEPTUAL FRAMEWORK FOR INVESTIGATING FUNDS OF KNOWLEDGE IN TEACHERS' PRACTICES	54
3.1. Introduction.....	54
3.2. Method for reviewing funds of knowledge theory	55
3.3. teachers' practices for using funds of knowledge.....	58
3.3.1. Sources of funds of knowledge.....	58
3.3.2. Methods for identifying students' funds of knowledge	64
3.3.3. Funds of pedagogical knowledge	65
3.3.4. Educational outcomes arising from teachers' uses of funds of knowledge	69
3.4. Funds of knowledge and its connection to socio-cultural learning theory	74
3.4.1. Sociocultural learning theory.....	74
3.4.2. Culturally responsive teaching and learning.....	76
3.5. Hông intellectual knowledge	78
3.5.1. Hông identity.....	78
3.5.2. Cultural heritage	79
3.5.3. Experiences in labour and production	80
3.6. Evaluation of funds of knowledge literature	81
3.7. Conclusion	84
CHAPTER 4. CASE STUDY RESEARCH METHODOLOGY AND METHODS.....	86

4.1. Rationale for case study research	86
4.2. Case study research method.....	89
4.3. Research aims and questions	91
4.3.1. Aims of the research	91
4.3.2. Research questions.....	92
4.4. Data collection	93
4.4.1. Ethical Considerations	93
4.4.2. Setting selection.....	96
4.4.3. Participant selection.....	97
4.4.4. Development of data collection tools	103
4.5. Data analysis.....	108
4.6. Conclusion	117
CHAPTER 5. KINH TEACHERS' IDENTIFICATION OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE	118
5.1. Introduction.....	118
5.2. Methodology to explore HMông students' funds of knowledge.....	119
5.3. Kinh teachers uncover HMông students' funds of knowledge	124
5.3.1. Family-based funds of knowledge.....	124
5.3.2. Community-based funds of knowledge	136
5.3.3. HMông students' own funds of knowledge.....	138

5.4. Conclusion	141
CHAPTER 6. USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN KINH TEACHERS' PRACTICES	143
6.1. Introduction.....	143
6.2. Kinh teachers' uses of HMông students' funds of knowledge	143
6.2.1. Funds of knowledge as the context for hooking HMông student learning.....	145
6.2.2. Funds of knowledge as a scaffold in co-construction of academic knowledge	151
6.2.3. Funds of knowledge for enhancing teacher-student relationships.....	156
6.3. Silence of funds of knowledge in classroom pedagogy.....	159
6.3.1. Conflict between HMông students' funds of knowledge and the school curriculum.....	159
6.3.2. Discontinuity between HMông students' cultural frame of reference and academic knowledge	162
6.4. Conclusion	167
CHAPTER 7. DIFFICULTIES AND POSSIBILITIES FOR KINH TEACHERS USING HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN PRIMARY SCHOOL.....	170
7.1. Introduction.....	170
7.2. Difficulties of applying HMông students' funds of knowledge	171
7.2.1. HMông student-related factors	171
7.2.2. Teacher-related factors	177
7.2.3. School-related difficulties	182
7.3. Possibilities of using HMông students' funds of knowledge.....	188
7.3.1. Teachers' establishing close relationships with HMông students and their families	189
7.3.2. Unrealised potential of ethnic minority education policies	192

7.4. Conclusion	194
CHAPTER 8. CONTRIBUTIONS TO KNOWLEDGE RELATING TO THE EDUCATION OF TEACHERS OF HMÔNG STUDENTS	196
8.1. Introduction.....	196
8.2. Findings.....	197
8.2.1. Kinh primary teachers' identification of HMông students' funds of identity as an educational resource.....	197
8.2.2. Recognition and acknowledgement of HMông students' funds of knowledge in Kinh primary teachers' teaching practices	201
8.2.3. Educational potential and difficulties in using HMông students' funds of knowledge in primary school curricula.....	204
8.3. Thesis statement	208
8.4. Implications for education policy and practice for teachers' uses of HMông students' funds of knowledge	209
8.5. Limitations informing recommendations for future research	215
APPENDICES	218
REFERENCES.....	245

LIST OF TABLES

Table 2.1: Keywords and search strings for teaching ethnic minority students search	26
Table 3.1: Contested definitions of funds of knowledge (adapted from Hogg, 2011).....	59
Table 3.2: Pedagogical practices for using students' funds of knowledge (adapted from Rodriguez, 2013).....	66
Table 4.1: Key components of this case study (adapted from Yin, 2014)	89
Table 4.2: Sub-research questions and data sources, data collection, and data analysis	92
Table 4.3: A brief description of the participants and their school settings.....	100
Table 4.4: In-depth interviews in qualitative data collection in the case study	103
Table 4.5: Sub-categories - Patterns of pedagogical actions through initial coding	115
Table 6.1: Kinh teachers' teaching strategies to using HMông students' funds of knowledge ...	144
Table 6.2: Teacher Phu using bilingual language in the HMông classroom.....	146
Table 7.1: Educational difficulties and possibilities for Kinh teachers using HMông students' FoK.....	171
Table 8.1: Comparison of household funds of knowledge (Moll et al., 1992) and the HMông students' funds of knowledge.....	198

LIST OF FIGURES

Figure 1.1: The structure of Việt Nam’ s national education system.....	8
Figure 4.1: Data analysis in this research.....	109
Figure 4.2: A Visual Model of the Coding Process in Qualitative Research (adapted by Creswell, 2012).....	113
Figure 4.3: Themes tree of Kinh primary teachers’ use of HMông students’ funds of knowledge in classroom pedagogy	116

LIST OF ABBREVIATIONS

BOET: Bureau of Education and Training

EM: Ethnic minority

ERIC: Educational Resources Information Center

FDS: Full Day Schooling

FoK: Funds of Knowledge

GSO: General Statistics Office of Việt Nam

MOET: The Ministry of Education and Training

MTBBE: Mother Tongue-based Bilingual Education

SEQAP: School Education Quality Assurance Project

ABSTRACT

Underachievement and low study engagement by HMông ethnic minority students in disadvantaged primary schools in Việt Nam evidence a need for more effective teaching practices to support these minority students' learning and reduce inequality within their educational environment. Learning about students' funds of knowledge (FoK) and incorporation into their learning enables teachers to increase relevant learning experiences, empowering a socio-constructivist approach to teaching and learning (Moll et al., 1990; González et al., 2005) and obviating cultural deficits facing disadvantaged students in school (Rodriguez, 2013). Moll et al. (1992, p. 134) defined FoK as "historically accumulated and culturally-developed bodies of knowledge and skills essential for household or individual functioning and well-being." This study investigates the potential for using FoK in the education of ethnic minority primary students in Việt Nam. Specifically, the purpose for doing so is to answer the questions as to whether and in what ways Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students.

The teaching of ethnic minority students in Việt Nam, particularly HMông children, has been raising significant issues in terms of curriculum and content, pedagogical practices, teacher resources and deficit thinking toward ethnic minority students (Tran Ngoc Tien, 2013; Lavoie, 2011). Therefore, there is a need to design curricula and pedagogy that are culturally responsive and for teachers and other educators to recognise HMông students' values by exploring and implementing their language, cultural aspects and resources for educational purposes (Lavoie, 2011; Luong Minh Phuong & Nieke, 2013).

To date, the research literature has emphasised use of the languages and cultures of ethnic minority people as a desirable strategy for HMông minority students' learning (Lavoie, 2011; Rheinländer et al., 2015). However, they have not been explicit about the deploying of ethnic minority knowledge, experiences and daily practices as educational resources to support academic knowledge in formal education, especially for HMông children. As HMông primary students have continued to struggle with their studies (World Bank, 2014; Dang Phuong Thao & Boyd, 2014), it

is likely that current approaches to teaching and learning in HMông classes may not be sufficiently supported.

The FoK concept (Moll et al., 1990; González et al., 2005) was introduced as a strategy in school settings to target: (1) understanding families and their cultural resources and (2) affording opportunities for innovations in classroom practices. This means that the language, knowledge, and skills of households are strategically related to classroom practices (Rios-Aguilar et al., 2011) and teachers, students, and parents can cooperate and strengthen relations of power in education (González et al., 2005). By examining students' FoK, teachers can learn, draw upon and then incorporate their FoK as scaffolding between familiar knowledge away from the school and academic knowledge in the classroom.

This research uses qualitative educational research method with a case study method (Yin, 2014). Through a case study it examines Kinh primary teachers' uses of HMông students' FoK in their teaching/learning practices. The conceptualisation of HMông students' FoK in Kinh teachers' teaching practices and their utility for students' study outcomes are developed and investigated. Toward this end, a field study was conducted in Văn Chấn district, Yên Bái province, in which a significant HMông population is settled. The case study was conducted through 29 in-depth interviews and documentary analysis. Targeted for this study were 26 Kinh primary teachers, two school principals, and one educational local manager. Data analysis procedures included transcribing data, translating data, open coding, categorisation, and thematic analysis.

The study has produced three key findings. First, Kinh primary teachers identified HMông students' FoK as an educational resource. Their FoK include their mother tongue, funds of identity, experiences in daily life and cultural artefacts. Second, each group of Kinh teachers interpreted HMông students' FoK in different ways and introduced various pedagogical practices for the application of FoK in the classroom environment. They included: using the FoK of HMông students as a context during instructional practices; scaffolding their FoK to make better sense of academic knowledge; and employing FoK to enhance teacher-student relationships. Third, there are difficulties and educational potentials for Kinh teachers' uses of HMông students' FoK in primary school curricula. However, the difficulties appear to outweigh the advantages that suggest implications for policy and practices improve teachers' uses of the FoK approach in teaching

HMông primary students in Việt Nam. Further research for teaching ethnic minority students toward a FoK approach in Việt Nam are identified.

CHAPTER 1. KINH PRIMARY TEACHERS' CURRICULUM USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

1.1. INTRODUCTION TO THE RESEARCH PROBLEM

“Mị thổi sáo giỏi. Mị uốn chiếc lá trên môi thổi lá cũng hay như thổi sáo”

(Mị plays the flute well. Mị bends the leaf on the lips and then blows leaves as well as playing the flute).

.....

“Anh ném Pao, em không bắt (I threw Pao, but you did not catch)

Em không yêu, quả Pao rơi rồi (You did not love me, you dropped Pao)

Em yêu người nào, em bắt Pao nào” (Who did you love? Which Pao did you catch?)

The two excerpts above are from *Vợ chồng A Phủ*, a famous novel by To Hoai (1952) and part of the national curriculum I studied during high school in Việt Nam. These excerpts talk about the life knowledge of HMông people and their cultural values and talents. Playing HMông flute (*Qeej*) and making music by blowing leaves with one's lips (*Nplooj*) illustrates the HMông's expert knowledge (Ó Briain, 2012). The HMông folk singing (*Kwv thiaj*) (Ngo Thi Thanh Tam, 2010) is about the ball tossing game (*Pov pob*) during the HMông New Year, which the community plays using balls, made by the skilful hands of HMông women (Ó Briain, 2012). This game reinforces the consolidation of the HMông community around significant cultural values through expressing the love of a HMông couple.

Here it should be noted that the full name of Vietnamese researchers is used in all citations throughout this thesis. For instance, Tran Ngoc Tien (2013) is used instead of Tran (2013),

because there is a small number of widely used family surnames in Việt Nam, for Ly, Ngo, Nguyen, Truong, Tran, and Vu. Because these are common surnames throughout Việt Nam, people's surnames are never used; they are addressed by their given names.

The HMông people have considerable knowledge in various areas relating to their daily activities and rich cultural values (Cha, 2010; Ngo Thi Thanh Tam, 2010; Lavoie, 2011; Ó Briain, 2012). Yet, as Cooper (1998, p. 49) pointed out, “while self-identify as HMông is strong, the HMông cannot be considered a particularly homogenous group”. In the educational sphere, HMông students from Việt Nam's mountainous northern provinces face significant barriers and disadvantages in their schooling (Luong Minh Phuong & Nieke, 2013; Tran Ngoc Tien, 2013).

This study focuses on problems relating to Kinh primary teachers' curriculum uses of HMông students' FoK. Among 54 ethnic groups in Việt Nam, the Kinh, who are considered ethnic Vietnamese, are the largest ethnic group, accounting for about 86% of the nation's population. The other 53 linguistic minorities represent a smaller proportion of about 14%, which includes Tày (1.9%), Thái (1.8%), Mường (1.5%), Khmer (1.5%) and HMông (1.2%) and more (GSO, 2011).

The HMông minority group, the focus of this study, migrated from southern China to northern Việt Nam in the mid-19th century (Cooper, 1998). They mostly live in the mountainous areas in northern Việt Nam and speak their own language (Duffy et al., 2004). These authors also reported that in the 1970s, 99% of the HMông population did not read and write the Tiếng Việt (Vietnamese) language, and that their own language was not implemented in school curricula, endangering this minority language.

Although Việt Nam has achieved the universalisation of a primary education level and reduced inequality through all educational levels nationwide, the ethnic minority groups are not achieving this standard, and remain confronted with challenges in the quality of their education generally (Truong Huyen Chi, 2009; London, 2011; Tran Ngoc Tien, 2013; Vu Thi Thanh Huong, 2014). For example, according to UNFPA (2012, p. 49) ethnic minority groups show low performances in literacy and numeracy at the primary school level, particularly the HMông, with the lowest literacy rate of 37.7%.

Existing literature advances that the main reason for this disparity is due to curriculum related-problems (Truong Huyen Chi, 2009; UNICEF, 2010; World Bank, 2011; Rheinländer et al., 2015). For example, the language of instruction uses the Tiếng Việt for all school levels nationwide, while HMông students generally speak it only in very basic form (Benson, 2005; Baulch, et al., 2007; Tran Ngoc Tien, 2013; Tran Thi Bich Lieu, 2014; World Bank, 2014; Rheinländer et. al , 2015).

In addition, the literature addressing national curricula seems to focus on academic knowledge, and the knowledge of dominant groups, while ignoring and underestimating the knowledge and cultural resources of ethnic minority people, including the HMông (Lavoie, 2011; Tran Ngoc Tien, 2013; World Bank, 2014). Some research also reveals that the majority of teachers and educators working with minority students come from the Kinh group, which leads to difficulties in communication between teachers and students during the teaching and learning process (UNICEF, UNESCO & MOET, 2008; Lavoie, 2011).

Despite Vietnamese government policies making efforts to improve the educational quality of ethnic minority groups, including HMông students, few schools in disadvantaged minority regions fully take advantage of these benefits for various reasons. Chapter 2 provides an overview of the disadvantages faced by both teachers and minority students in contrast to the theory behind Việt Nam's policies, and discusses current educational policies and the hurdles so created in the effort to improve the quality of ethnic minority education.

This chapter presents an overview of the research addressed in this thesis. First, the aims of this study are described (Section 1.2). Next, the research questions of this study are provided (Section 1.3). The rationale for the study is outlined, to investigate the motivations and approaches leading to the specific purposes of this research and associated research questions addressed in this thesis (Section 1.4). This is followed by the context of the study in Yên Bái province, where the research was undertaken (Section 1.5). A personal history that is relevant to and influenced by the researcher's decision to conduct the current research is presented (Section 1.6). The potential significance and delimitation of this study are then discussed (Sections 1.7 and Section 1.8). Finally, the overall structure of this thesis is provided (Section 1.9).

1.2. AIMS OF THIS RESEARCH

The aims of this research are to make an original contribution to knowledge about Kinh primary teachers' curriculum uses of HMông students' FoK. This study investigates the potential for using FoK in the education of ethnic minority primary students in Việt Nam. Specifically, the purpose for doing so is to answer the research question as to whether and in what ways Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students.

1.3. RESEARCH QUESTIONS

In relation to the aim of this research to make an original contribution to knowledge about Kinh primary teachers' curriculum uses of HMông students' FoK, the following research questions have been established.

The main research question: whether and in what ways do Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students?

Three contributory research questions arising from this question are:

1. What sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula?
2. How do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices?
3. What are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school?

The research question and sub-questions have been designed to investigate outcomes that relate to the following aspects: (1) Sources of FoK of HMông students and their families; (2) Kinh teachers' professional pedagogical strategies for using HMông students' FoK in teaching the school curriculum; and (3) factors that foster or constrain applying a FoK approach to HMông students in school settings.

1.4. RATIONALE FOR THIS STUDY

In this section, contextual information is firstly provided about the nature of the educational system in Việt Nam (Section 1.4.1, 1.4.2, 1.4.3, 1.4.4). Next, the concept of FoK is introduced as a potential educational intervention for Kinh teachers to improve the education of HMông minority students, by bringing into the classroom the HMông knowledge hinted at in the To Hoài novel, *Vợ chồng A Phủ* (1952) (Section 1.4.5). Finally, questionable assumptions about the FoK approach that contribute to the research purposes and questions are identified (Section 1.4.6).

1.4.1. The historical context of the education system in Việt Nam

Confucian heritage culture and its characteristics diverging from and aligning with the social constructivism approach have considerably influenced the Vietnamese educational system, especially on the primary school level (Ngo Vu Thu Hang et al., 2015; Doan Hue Dung, 2005). The research of Ngo Vu Thu Hang and her colleagues (2015, p.683), described “teaching and learning that was teacher-centred” – “the reproduction of knowledge directly taught by the teacher”...“students’ personal aspects discounted”...“hierarchical interactions in science classroom practices”-- had continued to exist in the educational environment in Việt Nam due to influences supported by the hierarchical order of Confucian heritage culture.

Vienamese folk sayings such as *A teacher for a day, a father for life* [*Thầy dạy một ngày là cha cả đời*], *Whoever teaches me a letter, he should be my teacher* [*Một chữ cũng thầy, nửa chữ cũng thầy*], or *You would not be able to do or learn anything without a teacher* [*Không thầy đố mày làm nên*] underscore the significant role of the teacher (Huynh Thi Nhan Hieu, 2015). Being in the subordinate position, students are traditionally expected to be respectful, trusting, and grateful to their teacher. While the social constructivist approach encourages interaction and a relationship

between the teacher and students, the influence of the Confucian heritage culture seems to create an arm's length relationship between teachers and students as a strategy to make students avoid arguing with teachers and remain modest and humble in their interactions with them (Phelps et al., 2014; Ngo Vu Thu Hang et al., 2015).

Under the cultural weight of Confucianism, teaching students to become obedient is the first priority, rather than developing intellectual and critical thinking in their communication. The statement *Learn morals first, learn literacy later* [*Tiên học lễ, hậu học văn*] affirms that the individual student is encouraged to learn moral values first and foremost and then to pursue literacy (Huynh Thi Nhan Hieu, 2015; Ngo Vu Thu Hang et al., 2015). These authors conclude that such cultural factors might hinder the implementation of inquiry-based learning and empirical knowledge in teaching primary education in Việt Nam.

The Vietnamese education system changed significantly when the then French colony was committed to an assimilationist policy from the mid-19th century to 1945. Reforms then replaced disjointed regional education with a new arrangement that included two separate systems: the French and Franco-Vietnamese school system in Cochinchina, and traditional academies in Tonkin and Annam (Huynh Thi Nhan Hieu, 2015). However, London (2011) stated that only 3% of the population completed primary school level as a result of this educational development.

During times of war (1945-1975), in the struggle for the country's independence, the education system launched literacy campaigns making primary school education compulsory, particularly focusing on ethnic minorities with the aim of achieving 'unity' among the great Vietnamese ethnic groups (Woodside, 1983). After independence and reunification in 1975, Việt Nam's education system was reorganised, influenced by the model of the Soviet Union. From 1975 to 1986, the functioning of the newly unified nation's education system was controlled by highly centralised management and a centralised planned economy that stagnated the educational system.

In 1986, *Đổi mới* (The Renovation) resulted in a market-oriented economy that brought with it a positive change for the national education system toward modernisation, standardisation, democratisation, and diversification (London, 2011). Education reforms focused on modifying and realising curricular objectives to content, textbooks, and educational perceptions, classifying

classroom activities according to learners' abilities. At the primary education level, ethnic minority and disadvantaged students were introduced to various syllabus programs and more flexible classes (Huynh Thi Nhan Hieu, 2015).

However, during *Đổi mới*, Vietnamese education was faced with challenges that hindered the quality of education at all levels. The educational disparities and inequality in different areas became a significant concern in terms of both quantity and quality (Glewwe & Jacoby, 1998), especially among ethnic minority students in disadvantaged schools. Issues arising from ethnic minority education in Việt Nam that led to the aims of this research (Section 2.2) are investigated in Chapter 2.

1.4.2. The education system in Việt Nam

According to its education laws, Việt Nam's national education system has the following levels: early childhood education, general education, vocational training, and university education (UNICEF & MOET, 2013; MOET, 2014). Figure 1.1 shows the structure of the Vietnamese national education system.

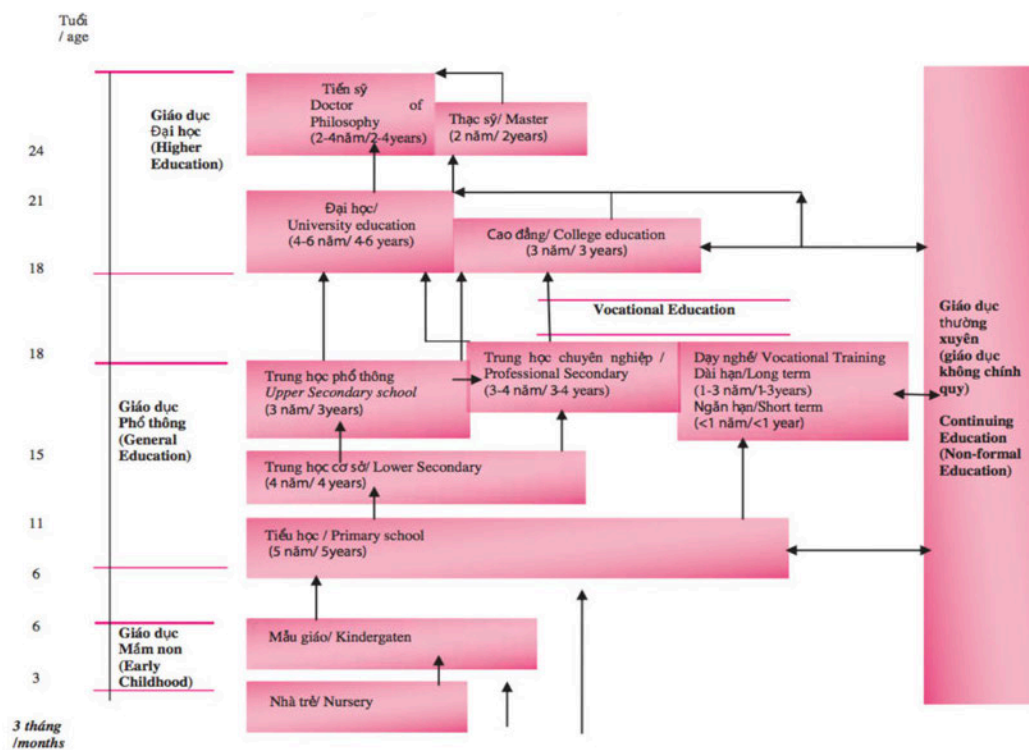


Figure 1.1: The structure of Việt Nam's national education system

(Source: MOET, 2014)

Early childhood education includes nursery school and kindergarten. General education includes primary education consisting of grades 1 to 5, for children who are 6 to 10 years old; lower secondary consists of grades 6 to 9 (11 to 14 years old); and upper secondary is for grades 10 to 12 (15 to 17 years old). The general education curriculum is designed for these three education levels and for twelve grades of general education. Vocational or technical training is an optional alternative to upper secondary education. University education includes college, bachelor's, master's and doctoral degrees (UNICEF & MOET, 2013; MOET 2014).

1.4.3. The Ministry of Education in Việt Nam

The Ministry of Education and Training (MOET) bears responsibility as the government's national agency with the function of managing education and training across the Vietnamese national education system (London, 2011; Pham Lan Huong & Fry, 2011; UNESCO, 2012).

In particular, the responsibilities of the Ministry of Education and Training (MOET) are:

1. setting broad policies and laws for all educational levels;
2. setting goals and objectives;
3. developing school curricula and content;
4. planning, delivering and maintaining quality provision;
5. setting standards for teachers and educational administrators;
6. setting rules for assessment, examinations and enrolments;
7. maintaining the system for certification.

However, the management of educational matters such as school buildings, staffing, and distribution of financial resources has been progressively decentralised by provincial departments of education and district offices of education, with continuing accountability to both MOET and the local government (London, 2011). At the provincial level, the Department of Education and Training manages upper secondary school and at the districts or communes, District Bureaus of Education and Training are responsible for kindergartens, primary schools, and lower secondary schools. While primary education is free, secondary education has been charging tuition fees to contribute to the financing of educational activities (UNESCO, 2012).

1.4.4. Education in contemporary Việt Nam

During the last decade, Việt Nam has enjoyed considerable progress, successfully achieving the universalization of primary education and is making sustained efforts toward the elimination of gender inequality across all school levels (UNICEF, UNESCO & MOET, 2008; Nguyen Van Phu, 2009; Glewwe et al., 2017).

Although Việt Nam has dedicated itself to achieving universalized primary education and reduced inequality throughout all educational levels nationwide, Việt Nam is still confronted with the challenge of bridging the gap in the educational achievement of ethnic minority groups as well as the quality of education generally (Truong Huyen Chi, 2009; Baulch et al., 2011; London, 2011; Tran Ngoc Tien, 2013).

Regarding ethnic minority children, there exists a variety of programs supporting education for poor and ethnic minorities to increase their accessibility to basic education. However, the quality of education for ethnic minority groups in the mountainous northern areas of Việt Nam remains rife with drawbacks and limitations. Significant issues surrounding the study performances of ethnic minority students (Baulch et al., 2011; Truong Huyen Chi, 2011a, 2011b; Dang Hai Anh, 2012; Tran Ngoc Tien, 2013; UNICEF & MOET, 2013) are:

1. the percentage of ethnic minority people who have never attended school is higher compared to other areas in the country;
2. the literacy rate is the lowest nationwide;
3. the higher the level of education ethnic minority girls acquire, the higher the drop-out percentage compared to boys;
4. repetitions, dropout rates, and illiteracy rates among disadvantaged ethnic students in mountainous areas remain high and in lower secondary school this disparity is even more extreme.

A report by the General Statistics Office of Việt Nam (GSO) (2011, p. 34) found that in 2009, the percentage of children aged 5 and older who had never attended school was still high (5.1%). This figure was highest among HMông people at 47.8%, meaning nearly a half of school-aged HMông children had never participated in any form of schooling. Meanwhile, the school attendance rate of children in this age group in 2014 was low among the HMông (72.06 %), lower than the Kinh at 90.70% (UNICEF, 2018, p. 21).

Furthermore, the education of ethnic minority students is bleaker for ethnic minority girls, who had significantly fewer chances to experience schooling than boys, especially at the lower secondary school level (UNFPA, 2012; UNICEF & MOET, 2013). Moreover, a World Bank and MOET (2009) report noted that many minority children were being promoted to higher grade in order to reflect high enrolment rate figures, even though these pupils still struggled with basic literacy and speak Tiếng Việt poorly.

Although the Vietnamese government has made concerted efforts to narrow the gap between ethnic Vietnamese and ethnic minority groups, the data suggest that the quality and sustainability of education for minority communities are at risk. The Government of Việt Nam has admitted that some segments of the social system remain underserved despite its best efforts. In particular, in rural and remote regions, the education system still fails to meet the aspirations of the Vietnamese government (London, 2011). The challenges of providing quality education service and resources for many students in disadvantaged areas, especially ethnic minority students in the countryside, have presented a significant barrier to the achievement of the governments' goals (UNICEF, UNESCO & MOET, 2008).

Truong Huyen Chi (2011a) stated that in the absence of quality research and comprehensive solutions to inequalities in ethnic minority education, schools might inadvertently be producing inequalities among ethnic minority groups, by providing a study environment where ethnic minority students might gain a sense of their social position and limits.

1.4.5. Funds of knowledge

A key question is how can achievement gaps between ethnic groups be closed? Given the concerns about the inequalities and low educational performances of ethnic minority children in Việt Nam, one possible solution is for teachers to learn to exploit students' FoK to improve their education.

The concept of FoK (Moll et al., 1990, González et al., 2005) was introduced as a strategy to tighten the connections in school settings between dominant-culture teachers and non-dominant-culture students, transcending deficit thinking with alternative attitudes toward ethnic minority students.

González et al. (2005) argued that a FoK approach targeted two aspects: (1) understanding families and their cultural resources and (2) providing chances for innovation in classroom practices. First, the FoK approach functions to identify and learn about students' and their household's knowledge, practices and culture in their lives (Rios-Aguilar et al., 2011). The aim of the FoK approach is to learn about "what people do and what they say about what they do" (González et al., 2005, p. 40). In other words, it explores the strengths and values of cultural

knowledge, and lived experiences of students and their families that teachers can draw on to improve student learning in educational settings. It also resists deficit thinking of children as learners whose problems are due to diminished experiences and practices at home.

On the other side, in their teaching practices, teachers can learn about, draw on and strategically relate the FoK of students to classroom practices, and use them as scaffolding between familiar knowledge away from school and academic knowledge in the classroom (Rios-Aguilar, 2010). In this way, validating the knowledge and other resources of students and their families would bring a post-modern perspective to culturally diverse education and a widening of long-term possibilities (González et al., 2005). As Rios-Aguilar et al. (2011, p. 177) argued, the FoK framework was “a basis for teachers to re-think what is *useful* knowledge for under-represented students” and made under-represented students’ resources, sociocultural capital and FoK available for transformation into an educational power resource.

The main concern to many FoK researchers is the inequities existing because of cultural deficit thinking and the lack of recognition and respect for minority students at school. For example, when assessing Latino students’ learning outcomes, they are often viewed as underachievers (Rios-Aguilar, 2010). As Hogg (2011) argued, teachers appeared to focus on the knowledge and practices of white middle middle-class children instead of recognising and drawing upon those of disadvantaged ethnic students and their families.

The explanation is that teachers lack the fundamental connections between the students’ FoK and their own. It follows that enhancing their knowledge of students is necessary for them to support ethnic students’ learning (Hogg, 2011). The deep potential of the FoK approach is to have the teaching and learning process better identify with minority children in a manner that could contribute to potential academic outcomes for this disadvantaged group (Rios-Aguilar et al., 2011; Hogg, 2013). Moreover, in disadvantaged areas lacking numerous ideal conditions, exploiting advantages in the strengths of the community to counter existing deficit perspectives is critical to improve teaching and learning quality, or at least create pedagogically productive relationships between teachers and students (Rios-Aguilar et al., 2011, p. 175).

Much FoK research demonstrates potentials for (1) improving teacher relationships; (2) student

engagement, (3) student outcomes; and (4) teacher professional development for the classroom through their learning and implementing of the rich and diverse FoK of minority students and their families (Messing, 2005; Andrews & Yee, 2006; Hogg, 2011; Rios-Aguilar et al., 2011; Hedges et. al., 2016).

In summary, the FoK framework might be of value in Yên Bái province, firstly to explore and understand the knowledge, cultural resources and practices of HMông minority students and their families in there, and secondly to develop a deeper understanding regarding the transmission of those FoK into educational settings. FoK theory would entail Kinh primary teachers recognising HMông students' and their families' everyday knowledge and practices, and implementing this new awareness in the classroom settings of HMông children, thus developing new knowledge and contributing a new educational resource.

1.4.6. Questionable assumptions about funds of knowledge

The use of the FoK concept in US school settings has been received positively, especially by volunteer teachers, Latino immigrant students and their families (González et al., 2005). However, the contested concept of FoK has been questioned (Hogg, 2011; Oughton, 2010; Zipin, 2009). In Việt Nam, particularly at the primary school level, there has been a lack of FoK scrutiny to elucidate its application, potential or effectiveness to ethnic minority students, especially HMông children. In addition, there has been no research identifying the establishment of Kinh teachers' learning and implementation of the FoK approach in primary school settings. To date, there is only the research of Hedges et al. (2016), which investigates a teacher - ethnic minority parent partnership foregrounding local FoK for minority children's learning in Việt Nam.

Thus, there is a need to explore teachers' pedagogical practices and the potentials of the FoK approach for ethnic minority students in the Việt Nam context, particularly HMông students in disadvantaged remote schools. Teachers' uses of the unique culture, language and FoK of HMông students and their community could be effective teaching strategies to improve study performance, school attendance, classroom engagement and reduced school dropout rates,

narrowing their academic achievement gap with the ethnic majority group (Kinh). However, how Kinh teachers (if any) who possess different language and cultural knowledge have interpreted this educational philology and implemented it in their everyday teaching practices to HMông children have been questionable.

Moreover, applying the FoK approach to ethnic minority students, especially HMông students in Việt Nam might well be inconsistent with other FoK previously reviewed due to complex influences in Việt Nam context, such as school policies, national curriculum, teaching practices, cultural deficit thinking toward ethnic minority students and ethnic family/school/teacher relationships. For example, UNICEF, UNESCO and MOET (2008) show that in rural, remote and disadvantaged regions of Việt Nam, applying policies and curriculum change is difficult due to the low quality and motivation of teachers and lack of in-service training and professional development.

Rios-Aguilar et al. (2011, p. 171) point out that very few studies have addressed and discussed the relationship between FoK and “issues of power, social class, ideology, and racism” and how it might restrict or hinder teachers’ efforts to bring students’ FoK into school settings. Thus, in the complex and unique context of disadvantaged schools in Việt Nam, there is a need to explore how Kinh teachers learn and transmit FoK of HMông students and their household into the classroom settings in relation to the patterns of wider structures of social classes and educational contexts.

1.5. CONTEXT FOR THIS STUDY

Yên Bái is an agriculture-based province located in the northern part of northern-central Việt Nam. It shares borders with six provinces -- Hà Giang province, Lào Cai province, Lai Châu province, Sơn La province, Phú Thọ province, and Tuyên Quang province (Phạm Thị Sen et al., 2015).

Like many northern highland provinces, Yên Bái is mountainous, and forestry and farming are its principle economic sectors. Yên Bái is among the poorest provinces of Việt Nam, with a high

proportion of minority groups (Pham Thi Sen, et al., 2015). In 2018, Yên Bái province had a population of 815,566 people, among whom ethnic minorities accounted for 50.36% of the total (Yen Bai Statistics Department, 2018). The population of Yên Bái includes 14 different ethnic groups, with the HMông, Phù Lá, Tày, Dao, Thái, Nùng, Giáy, and Hà Nhì being the most prominent.

According to the Yen Bai Statistics Department (2018), the province has achieved universal primary school level, with 180/180 communes meeting level I, 180/180 communes reaching level II; 179 of 180 communes meeting level III standards and 9/9 districts, towns and cities meeting level III standards.

In the school year 2015-2016, there were 52 primary level schools with 2,785 primary classes in Yên Bái province (Yen Bai Statistics Department, 2016). Most primary-aged children now attend school, including those in the highland areas, and the enrolment rate at the appropriate age is reported at 98.76% (Yen Bai Statistics Department, 2017). The participation of ethnic minority children in primary school has also seen steady improvement over the past 10 years. In the school year 2017-2018, the number of primary students increased to 77,644 children (Yen Bai Statistics Department, 2017). There were 3,984 primary level teachers in the 2017-2018 school year, but this figure had decreased compared to previous school years (Yen Bai Statistics Department, 2016, 2017).

In practice, however, the World Bank (2013) reported many ethnic minority students in the highland areas of Yên Bái do not favour attending school. Limited communication in their own language and the limited abilities of teachers to use it as the language of instruction in the school environment are the main reasons these students are unable to understand lessons, which creates discontent with their schools (World Bank, 2013). In addition, most teachers working with these ethnic minority children in Yên Bái are Kinh (the majority group) who cannot communicate in their students' mother tongue. Furthermore, this report pointed out that the majority of textbooks were not associated with the unique experiential knowledge and language of ethnic minority children and their community, also contributing to a low rate of primary school enrollment and completion in many highland areas in Yên Bái province.

1.6. PROFESSIONAL RELEVANCE OF THIS STUDY OF FUNDS OF KNOWLEDGE

Having discussed the context for this study, this section describes my personal history and my own story, which motivated me to conduct this research into FoK (Moll et al., 1990; González et al., 2005) and influenced my personal FoK as a researcher. The following key dimensions of this researcher's FoK informed this doctoral project.

1.6.1. Researcher's funds of knowledge

I have been a lecturer at Yên Bái Teachers' Training College in Việt Nam. My previous research and experiential teaching knowledge over the past 10 years has also provided background and support for my proposed research project into a FoK approach. Let me recount my FoK that are relevant to this study. I studied research as a student teacher in Hà Nội National University of Education, Việt Nam. When I became a lecturer in Geography Education at Yên Bái Teachers' Training College in Việt Nam I undertook research in this field. Part of my responsibility was training students who would, upon graduation as primary teachers, teach in the mountainous, low socio-economic districts and communes of Yên Bái province. Most of my students were ethnic minority groups such as HMông, Tày, Thái, who came from low-income and disadvantaged families within Yên Bái province and had different languages and cultural backgrounds from myself.

Working with student-teachers who would eventually serve in Yên Bái schools motivated me to expand my FoK by absorbing at least some of theirs. And through working with these ethnic minority pre-service teachers, I recognised the necessity to overcome educational hurdles such as the language barrier, cultural differences, and poor teaching and learning. Overall, the FoK of this teacher-educator broadened and deepened through living with and teaching ethnic minority students, and striving to achieve desirable educational outcomes by addressing educational obstacles facing ethnic groups, especially HMông students.

In 2015, I travelled to Sydney, Australia (Úc) to begin studies for a doctoral degree in education. This study-journey changed my beliefs, learning style and teaching approach. Here it is important to note that the concept of *theôria* (Học thuyết), from Ancient Greek, refers to a worldly journey

of socio-cultural activity involving three stages: travellers leaving home, then observing rituals or witnessing a spectacle and finally returning to their community to report on what they had seen (Nightingale, 2004; Singh, in press). Working with my supervisors and colleagues provided opportunities to explore by using my intellectual strengths and experiential knowledge. Instead of investigating ‘right or wrong’ knowledge, I came to understand that ‘knowledge’ (epistemology), and my responses to and engagement with FoK, depend on the sociocultural background knowledge and experiential knowledge of each individual’s life in relation to the context in which they are working. From being a shy, low-self-esteem early stage researcher, ostensibly attributable to apparent language barriers, perceived research deficiencies and new teaching methods, the deep understanding and support from my research educators shepherded me toward increased confidence and independence in my research, and especially the work of knowledge production and dissemination.

While a lecturer in my college in Việt Nam, I once believed that my key role as a teacher was delivering knowledge to my students, albeit passively, and to focus exclusively on what they had to learn, rather than how they might learn. However, my PhD study-journey helped me to recognise my actual role in teaching, especially when working with my ethnic minority pre-service teachers who had languages and cultural knowledge different from myself. My study-journey as an overseas student in Australia, facing the challenges of academic English and associated cultural knowledge also helped me realise it was possible to relate this gained experiential knowledge to my own student-teachers, who faced similar issues in their learning. Through my enhanced recognition and understanding, the deficiencies and strengths of my own FoK were at stake in this doctoral project. I came to understand the profound educational potential this theory could have for improving my students’ study outcomes.

Further, during my PhD studies, I had the care of my two children, currently aged only 14 months and eight years. Being an early stage researcher-mother also influenced my FoK about teaching and learning. My older son is studying in an Australian primary school in which his funds of Tiếng Việt and cultural knowledge are endorsed and validated by his teachers and school. For example, I and some other Vietnamese mothers were invited to his classroom to showcase Vietnamese cuisine in a lesson relating to cooking and nutrition. I witnessed the happiness and engagement of all the children that day and the pride on my son’s beaming face. This lesson was a profound

example of how education can provide students with opportunities to share their own funds of cultural knowledge and how it contributes to their active learning participation in the classroom while developing academic knowledge.

Moreover, I am a bilingual doctoral researcher, proficient in Tiếng Việt (language Viet) and Tiếng Anh (language English). By way of explanation, *Tiếng* means *language*, and unlike English, the noun comes before the adjective, thus the expression Tiếng Anh rather than ‘English language’.

Throughout this thesis, academic English (Tiếng Anh Học Thuật) is the primary language used, for several reasons. Firstly, most FoK literature reviewed was originally in English. Secondly, the teaching methodologies of the FoK framework implemented in teaching practices and school were executed in English. Thirdly, Western Sydney University’s thesis examination criteria include a high standard of English and professionalism.

However, through the three discussion stages of the concept of *theôria* (Học thuyết) -- from Ancient Greek (Nightingale, 2004; Singh, in press) - during my study journey *Tiếng Việt Học Thuật* (academic Vietnamese) plays a role at different points, including ethics, collecting evidence through interviewing and documentation and application.

Specifically, upon returning to my workplace and applying the FoK framework to training my HMông pre-service primary teachers to engage with their students’ FoK in HMông, there was significant motivation to turn to the FoK from my personal study journey and produce FoK concepts in *Tiếng Việt Học Thuật* (academic Vietnamese). For further discussion of the issue of translation see the section on data analysis in Chapter 4 (Section 4.5).

Finally, as a beginning teacher-researcher, in striving to engage intellectual resources from Việt Nam in my research in Australia, I aspire to introduce useful Vietnamese theoretical knowledge and its potential in the greater international context.

1.6.2. A story about Hương, a Kinh teacher, and Su, a HMông student

As a teacher at Yên Bái Teachers’ Training College, I have the responsibility to train primary

teachers during summer vacations and to discuss with them the issues they are required to tackle in the classroom. From this I learnt that the most prevalent problem that ethnic minority primary students face in their learning is language of instruction and unfamiliar knowledge that renders these students unable to catch up in the classroom and drop out of school as a result.

In a workshop, I spoke with a practicing teacher named Huong who had been teaching HMông students in a mountainous area for more than 10 years. This teacher said she was frequently dismayed by the poor behaviour and attitude towards learning of one female HMông student who was often truant and wanted to drop out of school. Teacher Huong recalled an event during Year 5 that forced her to re-evaluate her generally negative view of this little girl. One day, when attending at the student's home to encourage her to return to school, she found that the child was taking care of her two younger sisters, as her mother had given birth five days earlier. Every day in the early morning and after school, she had to feed the pigs. This involved walking to the family farm in a very isolated mountainous area, some distance from her house. My colleague reflected on this HMông student's maturity, how she took care her sisters and worked on the farm as well.

After visiting the girl's home, Teacher Huong gained a deeper understanding of her student's situation. She felt more sympathetic towards her and abandoned her earlier perceptions. As a result, her overall relationships with her classroom teaching method improve. Moreover, her realisation of the strengths of her students in their everyday lives when not in school, such as farm work or caring for siblings, motivated her to further explore this knowledge for inclusion in the teaching curriculum.

From this story, I could see the potential in understanding students' everyday life practices, knowledge and living conditions, and incorporating them in classroom teaching practices. This improved teaching method would help students feel they were studying in a friendly and safe learning environment where teachers understood and empathised with their backgrounds, and drew upon their strengths and knowledge of their daily lives to innovate teaching and learning opportunities in school settings.

The story Teacher Huong shared in the workshop prompted me to more critically examine how such an approach might improve ethnic minority students' schooling experience and study

outcomes. I wanted my research to explore whether and in what ways teachers could determine and implement such a novel approach in teaching HMông minority students in the primary school context in Việt Nam, and specifically Kinh primary teachers, whose language and cultural background differ from their minority students. A further possible outcome could be that promoting HMông minority students' educational outcomes would subsequently improve and develop their socio-economic circumstances and their community. Saravia-Shore and Garcia (2008) stated when school environments are associated with the children's lives and their community, and meet the needs of the children, there are positive impacts on productivity and the socio-economic aspects of families and communities.

1.7. SIGNIFICANCE AND INNOVATIVENESS OF THIS STUDY

This study contributes to theory, methodology, and practice in this research field. First, it contributes to FoK theory by situating FoK in Việt Nam, so creating a novel connection across different cultural settings. Currently, there appears to be only one study involving Việt Nam that has explored students' FoK for educational purposes; undertaken by Hedges et al. (2016), it explored teacher/parent partnerships. In contrast, this study is focused specifically on Kinh teachers' uses of the FoK of HMông students and their families in their teaching practices. This study documents and illuminates the perspectives these teachers adopted to frame their educational work.

Second, regarding methodologies, using FoK for case study makes a contribution to the rich ensemble of methods that qualitative researchers might choose for their work. All participants in this study were interviewed in Tiếng Việt, their first and preferred language. All interview questions were initially translated verbatim into Tiếng Việt by this researcher, who is bilingual in Tiếng Việt and English. On completion of this transcription the Tiếng Việt rendering was translated into English for analysis. However, translation is not a technical process, and poses challenges. For instance, Tiếng Việt can be literally and directly translated word-for-word as 'language Việt', and likewise Tiếng Anh can be similarly translated as 'language English'. Positioning translation is integral to the research method, because it can highlight conceptual

divergences between the two languages, and thus the intellectual cultures to which the languages provide access. This is important for two reasons. Why. First, it is necessary to understand the challenges FoK poses for Kinh teachers working with HMông students' repertoire of knowledge-and-languages. Second, knowledge generated through this research is intended to inform the work of teachers and teacher educators in Việt Nam, so it is important that as part of this research project, consideration be given to how the key concepts from this study might be represented in Tiếng Việt.

Third, in terms of education policy practices, the incorporation by Kinh teachers of HMông language, knowledge, experiences and daily life practices of HMông students and their families into the teaching and learning process and the school environment could become an educational resource to improve students' scholastic achievement and close the study performance gap among ethnic groups, especially the Kinh. Moreover, better understanding of HMông students' FoK will help authorities, curriculum planners, school systems, and educators in Việt Nam to know more about the practical applications of ethnic minority students' FoK in educational policies, school programs and teaching pedagogies.

1.8. DELIMITATIONS OF THIS STUDY

This study focuses on the teaching and learning process for HMông ethnic minority groups, who account for over 10% of the population of Yên Bái province. The focus will be at the primary school level, where HMông students experience the first steps in their education journey. This level has a substantial and lasting impact on students' learning progress and their further education.

Classroom primary teachers working directly with HMông minority students were chosen as the key interview participants. They are of Kinh background, seen as the ethnic majority group with different language and cultural knowledge from their minority students. They also directly make the everyday decisions during interactive teaching with their students and decide whether and in what ways FoK concepts could apply to the HMông students into their classroom.

An understanding of the Kinh teachers' acknowledgement and implementation of the FoK framework of HMông students and their families in classroom settings is the key priority of this study. The aim is to expose how Kinh primary teachers did or did not employ HMông students' FoK in their teaching of primary HMông students.

At the same time, the school principals of these schools and a local educational manager were also invited to take part in the research, to take into account their attitudes toward teaching based on the FoK approach. This study might be relevant for students in other disadvantaged mountainous areas who experience similar issues in ethnic minority education, but it will not address other ethnic minorities or regional areas in Việt Nam.

The current study focuses on Kinh teachers' uses of the HMông students' FoK to facilitate their teaching and students' learning. Given the research method used in this study, it should be noted that data from the HMông students and their parents were not collected and thus nothing can be said directly about the participants.

1.9. STRUCTURE OF THESIS

Chapter 1 outlines the background to the research, describing the nature of teaching and teachers in Việt Nam, specifically in the ethnic minority areas where the study was conducted.

To provide a sufficiently comprehensive study of recent, revealing research literature on schooling experiences among ethnic minority students in Việt Nam, Chapter 2 covers areas such as pedagogic challenges in teaching ethnic minority children, and the education policy practices to relating culturally responsive pedagogies and students' FoK approach for ethnic minorities in Việt Nam.

To make an original contribution to knowledge and to meet the aims established in the above research questions, Chapter 3 develops a theoretical framework for investigating funds of knowledge in teachers' practices. This chapter discusses key FoK concepts such as the *funds of knowledge definition; sources of funds of knowledge; funds of knowledge methodology; funds of pedagogy; outcomes of funds of knowledge; and HMông funds of knowledge*. Chapter 4 explains

and justifies the methods adopted as suitable for the research questions and related subject matter. Chapters 5, 6 and 7 are the results of the data collection methods and demonstrate the application of the data analysis methods as applied in this study. These begin with Kinh teachers' identification of HMông students' FoK for educational purposes in Chapter 5. Next, Chapter 6 considers how Kinh teachers use HMông students' FoK in their teaching practices. Chapter 7 then uncovers factors difficulties and/or possibilities Kinh teachers during their implementing of a FoK approach with HMông students.

Finally, the research findings are set out in Chapter 8, and accompanied by an exposition of the relevant evidence, and are discussed critically in the context of the FoK literature.

CHAPTER 2. PEDAGOGIC CHALLENGES IN TEACHING ETHNIC MINORITY STUDENTS IN VIỆT NAM

2.1. INTRODUCTION

This chapter critically reviews the recent literature providing an intellectual context for this study. It begins with the literature review method to canvas selection criteria that are relevant to the field and research questions (Section 2.2). The second section of this chapter addresses issues involved in the teaching of ethnic minority children, especially HMông primary students in disadvantaged schools in Việt Nam (Section 2.3). The third section discusses contemporary application and policies, which highlight teachers and educators' uses of ethnic minority students' language and cultural knowledge in fostering the ethnic minority teaching and learning process (Section 2.4). This is followed by considering difficulties in applying policies and educational programs to ethnic minority education (Section 2.5). Finally, an evaluation is made of the literature relating to the aim of this study and the main research question (Section 2.6).

2.2. LITERATURE REVIEW METHODOLOGY: A STRUCTURED LITERATURE SEARCH

This systematically informed literature review involved extensive searching for relevant, recent (within the past decade) literature that accommodated a focus on up-to-date research literature. There was a need to plumb large reservoirs of literature to locate the small subsets of studies that were deemed to be credible, recent, and relevant. The next step involved the filtering and selecting of smaller sub-sets and reducing the number of studies to those that addressed the particular research questions to be posed, thus providing a basis for judging where an original contribution to knowledge might be made.

In addition, to determine the extent of the literature search, a mapping exercise was performed. The search and mapping exercise described here indicates the systematically informed approach

employed in this study and helps to identify and clarify the selection of the literature, as well as minimise a range of biases in selecting the works to be reviewed. For this review, two large electronic databases were searched, one broad based (EBSCO) and the other a specialised education based database (ERIC, Educational Resources Information Center).

The selection of research literature (including some policy documents) and arrangement of this chapter follows this continuum of questions:

1. What are the pedagogic challenges of teaching ethnic minority students, especially teaching Hông students in disadvantaged schools in Việt Nam? (Section 2.3)
2. What characteristics of approaches to teaching ethnic minority students are encouraged and adopted by ethnic minority educational policies, projects, and/or other programs? (Section 2.4)
3. What difficulties face teachers and educators in applying the above policies and programs to ethnic minority students? (Section 2.5)

Based on such questions, keywords and search strings were generated using a thesaurus, and keywords used by the researcher in the field (Table 2.1).

The key terms used in the literature search for issues relating to teaching ethnic minority students in Việt Nam, and Vietnamese educational policies relating culturally responsive pedagogies and FoK for ethnic minorities are summarised in Table 2.1. To reach more related articles, various synonyms were used.

Table 2.1: Keywords and search strings for teaching ethnic minority students search

Keywords for teaching ethnic minority students search
Cultural deficit thinking
Culturally-responsive pedagogy
Ethnic minorities
Ethnic minorities' households
Ethnic students' prior knowledge and experience
HMông culture and knowledge
Language barriers
Minority students' FoK in national curricula
Pedagogical practices
Primary teachers, primary Kinh teachers
Remote pedagogical practices
Students' first language
Teacher resources
Keywords for educational policies search
The bilingual education program
Indigenous knowledge
Local stories and cultural resources
School curriculum
Students' mother tongue
Teacher education
Teacher-parent partnerships
Tongue-based bilingual education

These search terms were entered into the various search engines along with naming Việt Nam and HMông, to narrow the scope through focusing on this specific location and particular category of people. Search words and synonyms were combined in various ways during the process of seeking relevant up-to-date literature.

In the next step to address the particular research questions, my research interest focused on finding recent, relevant, credible literature on the links between disadvantaged ethnic minority students and pedagogical strategies drawing on ethnic minority students' FoK, especially HMông students' FoK.

My aim was to identify research and scholarly literature that related to my research questions, namely:

1. What sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula?
2. How do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices?
3. What are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school?

The initial key words search used, such as *HMông students' funds of knowledge and/or Kinh primary teachers*, yielded a large but mostly irrelevant body of US-centred research literature from the US-centred ERIC database.

During this first mapping stage, I had to make decisions about the relevance of search results. Most FoK papers and articles focused mainly on applications of the FoK approach in educational interventions and were focused on the USA, Canada, England, Australia and New Zealand, Africa, The Republic of the Philippines, Tanzania, Chile, and Mexico (Llopart & Esteban-Guitart,

2018; Hogg, 2011). For example, the search found potentially relevant research, such as the seminal work by Ewing (2012), which investigated using and incorporating mathematical FoK of Torres Strait families in Australia in teacher training. However, I was interested in research that was much closer to my research questions relating Kinh primary teachers' curriculum uses of HMông students' FoK.

My next step was to develop a set of criteria by which to judge the identified research literature, including requirements that the literature must:

1. be peer reviewed;
2. focus specifically on HMông students, ethnic disadvantaged minority students, Kinh primary teachers and school curricula;
3. concentrate on FoK;
4. be dated from 2015 onwards or be seminal works in the field of FoK;
5. be in the EBSCO or ERIC, Educational Resources Information Center database;
6. be written in English or Tiếng Việt.

However, I recognised that the research focused specifically on Kinh primary teachers' curriculum uses of HMông students' FoK is limited, thus my review included research related to issues around the teaching of disadvantaged ethnic minority students, especially HMông students in disadvantaged schools in Việt Nam.

There are potential limitations to this systematically informed approach to generating the literature for this review. For example, finding relevant, recent, and credible research articles depends on particular electronic databases, and whether there is bias in favour of English language research publications. Further, the key words used for conducting the literature search actually vary in effectiveness, which has made reporting the actual details of searches more complicated and may have negatively or positively affected the chances of finding all the potential literature.

Thus, two other procedures employed were to seek colleagues' recommendations and to trace references used in recent relevant, credible articles. These procedures also yielded relevant

supplementary literature. Examples include suggestions that led to the School Education Quality Assurance Project (SEQAP) (World Bank & MOET, 2009; Tran Ngo Minh Tam & Pasquier-Doumer, 2019) and Improving Quality Basic Education for Ethnic Minority Children Project (World Bank, 2013) reports, research that is relevant to this study.

Having identified relevant, recent, and credible research literature, I set about studying the content of the paper and deciding what and how much information to include from each in this review. Rather than read these papers as repositories of facts, I analysed and dissected the arguments that were offered. To read these papers critically, I had a series of questions relating to my study which I wanted the literature to address and which I began to record. Thus, the following two main sections asked: what are the key issues related to the teaching/learning of ethnic minority students in Việt Nam, and what educational policies in Việt Nam relate culturally responsive pedagogies and FoK for ethnic minorities? Thus, my focus was on thinking critically about the range of biases inherent in the literature I read, rather than simply reporting content.

2.3. ISSUES RELATING TO TEACHING ETHNIC MINORITY STUDENTS IN VIỆT NAM

This section reviews issues surrounding the teaching of ethnic minority students in Việt Nam that affect their underachievement, especially HMông primary students in the mountainous areas of Việt Nam. This review is to gain a deeper insight into the educational barriers that teachers, especially Kinh teachers and minority students (HMông students) are facing. They include: (1) limited school curricula and textbooks that are not associated with language, culture and knowledge in the everyday life of ethnic minority students (HMông children) and their community; (2) lack of minority students' fund of language knowledge in school environment; (3) lack of culturally-responsive pedagogy; (4) lack of adequate teacher education and HMông teachers; and (5) deficit thinking about ethnic minority students.

2.3.1. National school curricula lack ethnic minority students' funds of knowledge

Biased curriculum, content, and textbooks in the Vietnamese educational system constitute a significant constraint that challenges the teaching of minority students.

Firstly, the educational curriculum, content, and textbooks are designed and based on development and learning of the dominant group (the Kinh) who are the majority group in Việt Nam (World Bank, 2014; Lavoie, 2011).

The aim of this goal is to ensure all Vietnamese children have equal opportunity to participate in a unified nation-wide curriculum. However, this poses many significant challenges for children from vulnerable groups like ethnic minority children. For example, in a study of ethnic minority secondary school students in Lâm Đồng province, Việt Nam, Tran Ngoc Tien (2013) found that while ethnic minority students had to acquire considerable knowledge in school, they did not understand how such knowledge and skills could, in practice, be applied in the local context. He also found scant resonance between school knowledge and practices in the daily-lived reality of ethnic students and their communities. As a result, low levels of motivation and confidence in the benefits of the national educational system are recognisable among many ethnic minority students. In his research, he pointed out that practical skills and knowledge that make individuals able to better sustain their life in these disadvantaged areas seem to be less nourishing than academic school knowledge (Tran Ngoc Tien, 2013).

Secondly, national curricula and textbooks are not linguistically or culturally designed to meet the needs of non-Kinh learners (Lavoie, 2011; Lavoie & Benson, 2011; Bui Thi Kim Tuyen, 2014). Lavoie (2011), whose research centred upon HMông children in Lào Cai province - a mountainous area in the North of Việt Nam - pointed out the remoteness of school knowledge in promoting Kinh cultural values and dominant groups' knowledge while underestimating the values of non-dominant groups. He argues that national curricula assume the Kinh or urban school contexts and fail to take into consideration HMông communities' knowledge and skills and socio-cultural mores. Social-cultural values of the HMông have knowledge of traditional farming methods, agriculture and herbal medicine that deserve educational respect, strongly "self-identify" (p. 168) and cultural diversity, yet these are missing from the school curriculum. Lavoie (2011) argued that this ethnic minority knowledge needed to be recognised and included in a specific school curriculum.

The reason for this disparity, especially in educational aspects between HMông groups and Kinh groups, is explained by presenting the HMông as a disadvantaged group with poor academic

results and low enrolment rates at school (Lavoie, 2011). Agreeing with this point, Aikman and Pridmore (2001) added that the relationship between academic knowledge in school through the curriculum, pedagogy and the knowledge of HMông society is very fragile. Lavoie's (2011) comment underscores that it was inappropriate to apply Kinh curriculum in a HMông context that ignores values of cultural diversity and multiliteracies.

Further evidence of the remoteness of the curriculum system shows that the structure, textbooks, and teaching material contents lack relevance and flexibility, and represent cultural deficits. Many aspects of textbooks do not allow teachers to integrate students' socio-cultural knowledge and skills into classroom activities and disable students in making sense of some material (Luu Trong Tra Son, 2008; Luong Minh Phuong, 2015). The research of the Hieu Thi Nhan Huynh (2015, p. 154) on Jrai ethnic minority primary students in Gia Lai, in Việt Nam stated that there was only a "15% window" that was relevant to local content involving the teaching of local history, local songs, rhymes, stories, traditions and crafts within the category of local curricula. It is very challenging to realise integration in schools when language policy and national curricula remain remote from the ethnic minority community context. Within the country, a general education curriculum is designed for all elementary, lower secondary school, upper secondary school and for all students nationwide, with the exception of some models and projects that are for testing new curricula. As well, lack of flexibility hinders adaptation to conform with socio-economic circumstances and the incorporation to cultural content in individual provinces (World Bank, 2014).

In summary, apropos aspects of the knowledge and skills in school curricula, the existing weak and isolated curricula and textbooks that ignore their mother language and cultural knowledge pose a significant problem for minority students from the country's mountainous regions.

2.3.2. School environment lacks minority students' fund of language knowledge

Ethnic minority children in Việt Nam are facing difficulties benefitting from Vietnamese instruction in school. Language of instruction is the foremost obstacle hindering their study achievement, school attendance, and school enrolment (Lavoie, 2011; Phan Le Ha et al., 2014; UNICEF, 2010, 2016; Bui Thi Ngoc Thuy et al., 2019).

Tiếng Việt is the instructional language of schooling nationwide. This means ethnic minority students have to study Tiếng Việt, instead of their mother tongue (Lavoie & Benson, 2011; Bui Thi Ngoc Thuy et al., 2019). However, using Tiếng Việt for teaching ethnic minority students as with Kinh children has become the major challenge for ethnic minority children in accessing education (UNICEF, 2012; Luong Minh Phuong & Nieke, 2013; Luong Minh Phuong, 2015; Rheinländer et al., 2015). Rheinländer et al. (2015) had explained that Tiếng Việt seemed to present a serious problem for minority children in highland communities in the north of Việt Nam. In a study conducted among four ethnic minority groups of children, including Tay (Tày), Day (Dáy), Xa Pho (Xa Phó), Red Dao (Dao đỏ) being taught hygiene in communities in Northern Việt Nam, Rheinländer et al. (2015) also argued that many ethnic mountainous children were disadvantaged in their education due to language challenges in school. The students said they could not understand totally spoken messages and pedagogical practices when their teachers used the Kinh dialect. Younger children even had to sometimes ask their older peers to explain teachers' instructions in the students' own dialect. Other young students were dismissed from teaching sessions because of their national language limitations.

A UNICEF, UNESCO and MOET (2008) report showed that HMông children, especially HMông girls, could not understand the teachers' questions due to low Tiếng Việt capabilities. Hoang Lien's (2013) comments also underlined that there were but a handful of schools in Việt Nam where ethnic minority students could understand what their teachers said, again due to this language barrier. The problem worsened when the majority of teachers working with ethnic minority students were Kinh teachers (Trieu Quang & Jayakody, 2019), but a few Kinh teachers could speak minority languages and used this minority language capability to help their minority students learn effectively (Tsukui et al., 2017). For example, in the relationship between primary school students' first language and academic performance, and the ethnicity of teachers and their second language abilities, 70% of primary teachers in Lao Cai are Kinh and their mother tongue is Tiếng Việt, yet only 22% of their students use Tiếng Việt as a first language (UNICEF, 2012).

Lavoie (2011) also found that using Tiếng Việt as an instructional language in the HMông classroom has become a significant barrier to teachers and their HMông students' study. He claimed that many primary HMông children in Lào Cai province seemed excluded from classroom interaction and group activities due to their limited understanding of Tiếng Việt, especially when

their teachers could not speak H'Mông. Supporting this, Dang Phuong Thao and Boyd (2014) found that teachers (e.g. Kinh teachers) who lacked proficiency in minority language also represented a significant challenge to the teaching process and assessing minority students' achievement.

The reports of UNICEF (2015) showed that language difference is a typical barrier for students whose ethnicity differs from teachers who do not employ their students' strongest language in pedagogy practices. Teachers working with minority children confirmed that, from their perspectives, fluency in both their ethnic minority students' and Tiếng Việt languages were important factors in enhancing the education quality and school behaviour for ethnic minority students (Tran Thi Bich Lieu, 2014). However, Truong Huyen Chi (2009) argued that in practice, teachers seemed not to recognise (and in fact underestimated) the importance of using the local language and other minority student resources as tools for teaching (Truong Huyen Chi, 2009). Thus, Glewwe et al. (2012) suggested that deeper research on the role of mother tongue knowledge in teaching ethnic minority students and their study performance needed to be done.

2.3.3. Lack of culturally-responsive pedagogy

Teachers working with ethnic minority students usually appear to lack sensitivity to their culture and isolate themselves from the minority community.

Rheinländer et al. (2015, p. 265) found that in teachers' views, ethnic minority students bring their own language and "the village way" (*cách trong làng*) with them to school. However, the teachers see these students as having a "low awareness" of school academic knowledge. The teachers work with the supposition that their teaching methods must focus on theoretical or advanced, modern knowledge and "the civilized way" (*cách văn minh*) of Kinh values must be applied to develop the knowledge of ethnic minority students in school.

Ignoring the interests, cultural knowledge, and needs of minority students is another aspect of the pedagogical practices in remote disadvantaged and ethnic schools in Việt Nam. From their research on non-dominant groups in Việt Nam and related educational pedagogy, Dang Phuong Thao and Boyd (2014) argued that the teachers' pedagogy was designed and used in the classroom

to serve their own personal goals rather than the needs or interests of their students. Rheinländer et al. (2015) described employment of didactic teacher-centred teaching methods that focus on “discipline, knowledge acquisition and repetition” (p. 265) and ignore “practice-based teaching methods” (p. 269) are the most preferred approaches to disadvantaged ethnic students domiciled in the mountainous areas in the country.

Dang Phuong Thao and Boyd (2014) explained these pedagogical practices are due to educational policies that leave teachers with sole responsibility for what their students learn. These authors explained that at the primary level in Việt Nam, teachers must ensure that their children are able to read and write in Tiếng Việt through the teacher’s direct instruction. The teaching methods and lesson plans, therefore, strictly follow the curricula provided, which are implemented exactly the same way throughout each school year. Dang Phuong Thao and Boyd (2014) also argued that without specific teaching strategies and consideration of the content of the curricula, the learning motivation of ethnic minority students might decrease due to poor pedagogical practices that ignore and underestimate the minority children’s interest, abilities, and knowledge.

Employing a culturally sensitive teaching method to engage the culture and social resources of ethnic minority students in school has been suggested as a solution for educators and policymakers (World Bank, 2011). In addition, the research of Vieluf et al. (2012, p. 28) reveals that both “pedagogical norms” and empirical evidence regarding family backgrounds, intellectual ability and previous knowledge may help teachers identify important areas of the classroom environment and have strong impacts on student achievement. However, in reality, when compared with urban and Kinh students, children from ethnic backgrounds seem more affected by the lack of ideal teaching practices that are more closely associated to their living situations (Dang Phuong Thao & Boyd, 2014; Rheinländer et al., 2015).

2.3.4. Lack of adequate teacher education and lack of HMông teachers

Teaching staff is an important factor that influences the quality of ethnic minority education. Members play key roles as interpreters and deliverers of school curricula in pursuit of effective learning by learners (Schleicher, 2012). However, teachers working with ethnic minority children, especially HMông students have been shown to be (1) too few in number, especially minority

teachers; (2) of poor quality; and (3) lacking in adequate professional training.

The shortage of teacher resources, especially local teachers, is a priority concern and common problem in many schools with high percentages of students who are of ethnic minority and disadvantaged backgrounds. Many research reviews indicate a shortage of ethnic minority teachers who work with ethnic minority children in Việt Nam (World Bank & MOET, 2009; Truong Huyen Chi, 2011a, 2011b; Hai Anh Dang, 2012). In the school year 2007-2008, HMông was one of seven minority languages offered in 17 disadvantaged provinces and cities to 107,905 pupils and over 1,400 primary school pupils between Grades 3 and 5 in Yên Bái (the research context) and Lào Cai province (Truong Huyen Chi, 2009, p. 13). However, there remained a serious shortage of around 1,000 teachers who were native speakers in ethnic minority communities in Việt Nam in the school year 2007/8 (Truong Huyen Chi, 2009, p. 14). In a HMông community in Lào Cai province, located in the northern highlands of Việt Nam, only two teachers teaching using HMông language bore the responsibility to work with 69 students in three primary schools in 2008 (Truong Huyen Chi, 2009, p. 13). In addition, HMông teachers are viewed as having substantial language skills, cultural sensitivity and a deep understanding of HMông children, resulting in contributions to and engagement with students' learning (Giacchino-Baker, 2007; Lavoie, 2011), but they account for only 5% of all teachers in Việt Nam (Nguyen Van Phu, 2009) and have not been trained through any language and pedagogy courses (Truong Huyen Chi, 2009).

There are significant reasons that lead to many teachers, especially qualified Kinh, being unwilling to make long-term commitments to teaching in disadvantaged mountainous areas, thus leading to a shortage of teachers in disadvantaged minority schools. It involves distant and disadvantaged geographical locations, limited resources in infrastructure, facilities and finance, workload issues and differences between language and cultural knowledge with ethnic minority groups (Truong Huyen Chi, 2011a, 2011b; UNESCO, 2012; Le Thuc Duc & Nguyen Thi Thu Hang, 2016). For example, in his research of HMông communities in disadvantaged areas Việt Nam, Lavoie (2011) found that teachers working there were not only responsible for teaching the children while they were in the classroom, but they also had additional obligations of care for them, such as returning the children home, as well as attending their homes to escort them to school, due to challenging access difficulties existing in mountainous regions. In boarding schools, teachers' responsibilities are also more challenging, in light of an awareness that ethnic minority parents still believe that their children's learning is not their duty, but the teachers' (UNICEF, UNESCO & MOET, 2008; Tran Ngoc Tien, 2013). Thus, the considerable added responsibilities and heavy demands placed upon teachers working in these ethnic minority areas are likely to result in a significant shortage.

The scarcity of minority teachers has required schools to resort to Kinh teachers or volunteers (Giacchino-Baker, 2007; Truong Huyen Chi, 2009), though they lack understanding not only of the sensitivities of their minority students, but also of their cultural mores. Rheinländer et al. (2015) revealed that this has rendered many Kinh teachers incapable of engaging with the knowledge and cultures of their ethnic students, and by extension unable to effectively incorporate them into their teaching practices. Ultimately, this prevents the children from benefiting from their education. Many reviewed studies (UNICEF & MOET, 2010; Lavoie, 2011; Rheinländer et al., 2015; Nguyen Thi Thuy Trang & Hamid, 2017; Karlidag-Dennis et al., 2020) have reported that Kinh teachers with different backgrounds from their ethnic minority students find it very difficult to make appropriate connections with their daily lives. Lavoie (2011) stated that by not having enough teachers who can understand the community, the vicious circle of exclusion will only continue.

The second problem in terms of teacher resources in disadvantaged and minority schools is low teacher qualification. According to Việt Nam's Education Law 2005 (Ministry of Education and

Training, 2005), primary teachers need to have completed a minimum of 12 years of schooling and another two years of study at a local teacher training college. However, many upland teachers currently working at primary schools in Việt Nam have low level of educational backgrounds and have become unqualified according to current requirements of MOET (Hamano, 2008; Le Thu Duc & Nguyen Thi Thu Hang, 2016). In Yên Bái province, figures showing the academic backgrounds of teachers' in 2005 indicate that 28.2% fall into the 9+3 year groups or lower level (9+3 teachers are graduates from secondary schools who have also completed 3 years at local teacher training colleges) (Hamano, 2008). Although 9+1 and 9+3 teachers have upgraded their teaching and professional qualifications through annual participation in training and workshops, which include summer training programs, qualification improvement training, teaching demonstrations and in-school training, some teachers in mountainous areas nonetheless seem to be challenged in their acquisition of new teaching methods under the new curriculum reform (Hamano, 2008). Thus, unqualified teachers working in disadvantaged or mountainous regions in Việt Nam continue to be a significant problem that constrains the education quality of ethnic minority students.

Finally, inadequate professional teacher training has been considered a significant concern for the teaching quality in ethnic minority education. Luong Minh Phuong (2015) shows that in most teacher training curricula, there is a lack of training courses involving intercultural sensitivity in the education of minority students. The training programs mainly focused on professional subjects and basic others such as philosophy, pedagogy, psychology, civic education, and information science (Luong Minh Phuong, 2015).

To sum up, lack of supply of teacher resources especially local teachers, qualified teachers and professional training directed toward intellectual minority knowledge, constitutes one of the main factors that make teaching more difficult when teaching in disadvantaged schools in Việt Nam.

2.3.5. Deficit thinking about ethnic minority students

Deficit thinking and stereotypical attitudes toward ethnic minority students as slow learners or social and intellectual inferiors to the Kinh have impacted the motivation and academic

performance of these students (Giacchino-Baker, 2007; Baulch et al., 2011; London, 2011; Hai Anh Dang, 2012).

Truong Huyen Chi (2009) argues the educational system in Việt Nam presents a “selective preservation framework” that reflects cultural deficit thinking. As a result, teachers who are unaware of ethnic students’ knowledge and culture and maintain a “stereotypic observation” have commonly expressed in frustration that Kinh students have a better ability to absorb the teaching than their minority counterparts. Most teachers, administrators, and stakeholders describe minority students’ low academic achievement as due to the students’ lack of ability to learn (Giacchino-Baker, 2007), lack of parental support and poverty (Truong Huyen Chi, 2011b), and are less inclined to criticize the failure of the education system (World Bank, 2011). This suggests that, although teachers want to improve educational performance, they are constrained by deficit thinking regarding their ethnic students.

While agreeing with this opinion, Giacchino-Baker (2007) argues the Vietnamese educational system has not shouldered the responsibility to motivate and encourage interest in ethnic minority students. He explains that most teachers, administrators and stakeholders only appear to discuss minority students’ ability and their low academic background, while they overlook or limit their criticisms of failures in the educational system.

The common misconception also is reflected in a report of the World Bank and MOET (2009) in which many teachers claim that Kinh pupils have better study performances than minority children. In line with this thinking, teachers cannot therefore be held responsible for their perceived and entrenched attitudes. Baulch et al. (2011) who experienced working in ethnic minority areas in Việt Nam suggest that ethnic minorities are frequently considered as less developed, less “civilized”, or more “backward” than the Kinh. The Kinh suppose that financial support by the government and international agents in reducing poverty for non-dominant groups implies that they are backward and need assistance to catch up with them (Baulch et al., 2011).

Stereotyping and misconceptions by systems, structures, and people regarding ethnic minority groups in Việt Nam perhaps stifles efforts to make their voices heard. Ethnic minority students are not lacking in knowledge about themselves and their needs, but lack a “hybrid space” (Baton

& Tan, 2009) for their voices to be heard. This results in negative consequences such as an absence of belief in the value of education and the projection of unrealistic educational outcomes, as well as goals and care in schools, which consequently lead to many ethnic minority students in Việt Nam dropping out of school (World Bank & MOET, 2009; Tran Ngoc Tien, 2013).

Furthermore, cultural deficit thinking toward minority children by Kinh primary teachers resulting in the absence of friendly teaching and learning environments would add another layer of complication to ethnic minority students' study. UNICEF, UNESCO and MOET (2008) research performed by way of classroom observation pointed out that ethnic children often receive less attention and assistance from their teachers, especially ethnic girls. They also tend to call on successful, confident students or male students, resulting in a lack of comprehensive and equal support for all ethnic students.

Tran Ngoc Tien (2013) has also explained that criticism, prejudice, and unfriendly Kinh teacher-ethnic student relationships constitute the main feature of this discussion. During interviews, minority students intimated that they found it difficult to share their thinking, feelings, and problems with Kinh teachers, within and outside the classroom. An example provided in the report of UNICEF, UNESCO and MOET (2008, p. 36), referred to an ethnic minority HMông girl who said, "I came to class late and I cannot read well and I was criticised by the teacher. I don't like going to school."

Researchers visiting schools with ethnic students in Mang Yang district, Pleyku city in Việt Nam, found that punishment, including verbal and physical abuse, seemed common in ethnic educational environments (UNICEF, UNESCO, MOET, 2008). These negative teacher attitudes might to be due to differences in physical, social, and language and cultural characteristics between Kinh teachers and their minority students (Tran Ngoc Tien, 2013). In the absence of an empathetic view or understanding of the backgrounds and living environments of ethnic minority students and their community, gaps in relationships between teacher and student have widened due to teachers' deficit thinking and negative attitudes (Giacchino-Baker, 2007; Truong Huyen Chi, 2009; London, 2011).

In addition, due to the retention of deficit thinking toward their minority students and lack of understanding of their students' cultural knowledge, teachers are unable to elaborate in detail what minority cultural values and customs are actually relevant. Kinh teachers even appear to hold the view that the cultures of the ethnic communities are backward (World Bank & MOET, 2009; Truong Huyen Chi, 2011a).

To summarise, these five major difficulties hinder teachers in providing pedagogical practices that are relevant to the language, cultural knowledge, and daily experiences of ethnic minority students. Lack of ethnic minority students' FoK in national curricula is likely the most significant constraint that hinders Kinh teachers' use of ethnic minority students' FoK in their teaching practices. In addition, disregarding their mother tongue places ethnic minority students in a disadvantage in accessing their education and study. This problem is more challenging due to a lack of teacher resources, especially ethnic minority teachers, appropriately qualified teachers and professional training directed toward language and cultural intellectual minority knowledge. Furthermore, without culturally sensitive teaching methods to engage the cultural and social resources of ethnic minority students in school, they lose their motivation to learn. Finally, stereotypical views of ethnic minority students constrain opportunities to engage ethnic minority children's previous knowledge, experience and living practices into academic knowledge and concepts at school.

To lessen disparities in the quality of education between minority groups and the majority in Việt Nam, improving the capabilities of teachers and educators who work with minority students should be a key educational policy. Increased efforts have been made in recent years to develop new curricula, culturally responsive pedagogies, bilingual programs, increased opportunities for local teachers, local language instruction for teachers whose language differs from their students and finally, to improve cooperation between school-teacher-student/family to provide quality education and enhance ethnic minority children's achievement (World Bank & MOET, 2009; World Bank, 2011; Government of Vietnam, 2012). The section to follow discusses educational policies relating to culturally responsive pedagogies and the FoK approach for ethnic minorities in Việt Nam.

2.4. EDUCATIONAL POLICIES AND PROGRAMS FOR ETHNIC MINORITIES IN VIỆT NAM

The opportunity to competently demonstrate the FoK approach in school settings arose when many educational programs were established for ethnic minority schools in selected provinces.

2.4.1. Educational policy context for ethnic minority students in Việt Nam

Việt Nam is a multiethnic country with 54 ethnic groups. Nearly 86% of the population is Kinh group while 53 ethnic minority groups account for the remaining 14% (GSO, 2009). The Government of Việt Nam and the Ministry of Education and Training (MOET) in conjunction with the Committee for Ethnic Minorities and other respective ministries bear responsibility for formulating policies and regulations to improve the educational quality of ethnic minority groups. They focus on a diversity of aspects including: reducing inequality between ethnic groups, preserving language and cultural aspects based on human rights, avoiding discrimination against ethnic minority groups and their cultural values, supporting teachers in approaching new teaching methods, and engaging minority students and their parents/community in the teaching and learning process. The existing policies and documents include the following key elements:

1. Support through scholarships, tuition fees, textbooks, food, boarding and financial aid to encourage ethnic children to go to school.
2. Support policies relating to teaching facilities, individual aid, and infrastructure for teachers and staff to improve the teaching and learning quality of minority and mountain area students.
3. Establishment of educational programs and projects in terms of accommodation and care to promote education for ethnic minority students in disadvantaged regions, such as ethnic minority boarding schools and semi-boarding schools during 2011-2015.
4. The Department of Education for Ethnic Minorities under MOET coordinating with other stakeholders in implementing various training courses that focus on ethnic minority identity and practical skills for ethnic minority children (GSO, 2011; World Bank, 2014).

Significant efforts to improve educational quality and reduce inequality in the education sphere among ethnic groups are manifested through strong commitments embodied in a series of legal documents by the Government of Vietnam. Specifically, Article 7 of the Education Law (Law No.38/2005/QH11) states that:

The State shall enable ethnic minority people to learn their spoken and written languages in order to preserve and develop their ethnic cultural identity, helping pupils from ethnic minorities to easily absorb knowledge when they study in schools and other educational institutions. The teaching and learning of these languages shall be conducted in accordance with the Government regulations (UNICEF, 2015, p. 26).

Similarly, Article 5 of the new Constitution of Việt Nam (2013) clearly proclaims that:

Every nationality has the right to use its own language and system of writing, to preserve its national identity, and to promote its fine customs, habits, traditions and culture (UNICEF, 2015, p. 25).

Additionally, with the support of UNESCO, an initiative on teaching for sustainable development highlights the importance of introducing minority language and cultural knowledge into school settings. Along with curriculum reform, improving the capacity of pre-service and inservice teachers for teaching minority students is concentrated upon (UNESCO, 2011).

In addition, MOET has, in cooperation with various non-governmental organizations, conducted various training courses to improve the skills and knowledge of teachers working with ethnic minority children so that they can become facilitators of active teaching. An array of pedagogical approaches was suggested for teachers, including (1) student-centred learning; (2) bilingual education; (3) culturally-sensitive teaching and learning practices; and (4) the employment of minority teachers from kindergarten through to higher schooling (UNICEF, UNESCO & MOET, 2008; World Bank, 2011).

With the support of non-governmental organizations, many ethnic students were able to take part in training courses on local context and culture as a way of preserving their respective cultural identities. Extracurricular activities on life skills were conducted to help ethnic pupils more successfully adopt essential skills such as life leadership, facilitation, writing and communication, life skills, and teamwork. As a result, the pupils became more confident, willing, and able to raise their voices in school and in their family environments (World Bank & MOET, 2009).

2.4.2. Educational programs for ethnic minority student education in Việt Nam

This section will describe significant educational programs for ethnic minority student education in Việt Nam that focus on recognising and valuing their cultural aspects and resources for educational purposes.

2.4.2.1. Bilingual Education Program

One of the most significant actions was the Bilingual Curriculum Program, approved in 2008. The main purpose of this program was to develop a bilingual curriculum framework for ethnic minority children based on national education standards (UNICEF & MOET, 2011, 2012, UNICEF, 2015). Ethnic minority languages including The Hoa, Tày-Nùng, Thái, HMông, Khơ-me, Chăm, Gia-rai, and Ba-na were chosen for pilot projects of bilingual education. With the support of UNICEF, bilingual materials following MOET standards were printed and delivered to selected primary grades in 2013, including these subjects: Mother Tongue (textbook and a workbook for writing); Tiếng Việt; Mathematics; Social Sciences; Natural Sciences; History, and Geography. The materials were grounded on curriculum framework and focused on flexibility, cultural adaptation and children's experiences, without abstract concepts (UNICEF, 2015).

In line with this project, MOET introduced the Mother Tongue-based Bilingual Education (MTBBE) program in collaboration with UNICEF Việt Nam. For the 2007-2008 school year, HMông was one of seven languages (The Hoa, HMông, Khơ-me, Chăm, Gia-rai, Ê-đê, Ba-na) chosen for study as a subject in schools throughout 17 provinces and cities in Việt Nam. Curricula and textbooks in these seven languages were prepared by MOET (Truong Huyen Chi, 2009) and over 1,400 Grade 3 and 5 primary school students in Yên Bái province (this research context) and

Lào Cai province were educated in their respective mother tongues as a subject by both Kinh and minority teachers (Truong Huyen Chi, 2009, p. 13).

After two years of implementation beginning from the 2009-2010 school year, the project indicated outcomes for ethnic minority students' performances, especially in language and mathematics. These students showed better results compared with minority peers who did not participate in the program, suggesting this initiative could have a beneficial long-term impact on their achievement (UNICEF & MOET, 2011; Huynh Thi Nhan Hieu, 2015; UNICEF, 2015).

In line with the MTBBE program, language mapping was a strategy deployed to investigate the languages spoken used by primary students in school (UNICEF & MOET, 2012). The Primary Classroom Language Mapping project was launched in Lào Cai province, which has Việt Nam's largest HMông population (UNICEF & MOET, 2012). Report findings in UNICEF and MOET (2012) showed a positive relationship between HMông students' language proficiency and their academic performance:

HMông (H'Mông) students in MTBBE schools performed above the provincial average and well above their peers in non-MTBBE schools. The MTBBE program is helping HMông children close the learning gap between themselves and other ethnic groups.

In terms of the impacts of this project on teachers, UNICEF (2015) stated that teachers of ethnic minority students (Kinh teachers and local teachers) had more opportunities to extend their professional development for the benefit of ethnic minority students through various training activities. Specially, this was represented in the following areas: (1) the mother tongue and culture of minority students, (2) instructional language and student-centred methods, and (3) action research methodologies (UNICEF, 2015).

An official report on the MTBBE program (UNICEF, 2015, p. 36) stated that:

The project has taught teachers to observe, monitor and record academic progress of each student in the class, and to make reasonable adjustments

in the teaching process to help them (students) understand the lesson. For this purpose the teachers use a notebook in which they track the progress of learning. They take note of new words, errors in spelling or pronunciation. In sum, they take note of important events in the classroom. In this way teachers develop the habit of following the learning of students and the habit of collecting evidence to assess how much progress the students are making.

The MTBBE program has thus provided teachers with opportunities to train as researchers in their teaching, which is considered a key concept of the FoK approach.

2.4.2.2. The School Education Quality Assurance Project

The aims of the School Education Quality Assurance Project (SEQAP) focus on improving learning outcomes and decreasing inequity in learning outcomes of disadvantaged ethnic minority groups (World Bank & MOET, 2009; Tran Thi Bich Lieu, 2014; World Bank, 2017).

The 36 most disadvantaged provinces in Việt Nam are in four main regions: the mountainous Northern region, South East; Central Highlands; and Mekong River Delta. These areas are beneficial to this project. Many activities in this project focus on exploring language, culture and other values of ethnic minority students and their community for educational purposes (Tran Ngo Minh Tam & Pasquier-Doumer, 2019; World Bank, 2017). They include the significant following aspects:

Training in local language for teachers

The SEQAP project aims to help teachers working with ethnic students to learn the local language so they could speak it in teaching their ethnic pupils. In particular, SEQAP has indicated that when teachers can communicate or use their students' mother tongue as an instructional language in the class, the quality of their teaching and their minority primary school students' learning outcomes in all subjects improve. In addition, primary teachers' learning of local languages is a useful way to support them to explore and enhance the identities of ethnic minority students and their

community (World Bank, 2017). This initiative also contributed to the preparation and printing of a guidebook for all 53 ethnic languages in Việt Nam titled *Print guidebook for teachers to study local language*, to help train teachers of ethnic pupils in the local language (World Bank & MOET, 2009).

Supporting disadvantaged ethnic children for Full Day Schooling

Full Day Schooling (FDS) means disadvantaged and ethnic minority students attend school for both morning and afternoon sessions on several weekdays (Tran Thi Bich Lieu, 2014; Tran Ngo Minh Tam & Pasquier-Doumer, 2015, 2019). According to Tran Ngo Minh Tam (2019), this implies an increase of at least 40% of instructional time compared to half-day study at the elementary level. Extending the time for learning at school would improve study outcomes of these children from receiving a full day of instruction (Tran Thi Bich Lieu, 2014).

However, this suggests that teachers should understand their FDS curriculum well and have sufficient capabilities to apply new and active teaching methods and plan extracurricular activities for their students (Tran Thi Bich Lieu, 2014). In addition, some ethnic minority parents seem unwilling to approve of this because having their children in school all day means their labour will not be available for domestic and agricultural work (World Bank & MOET, 2009). Thus, Tran Thi Bich Lieu (2014) suggested there is a strategic need to raise awareness among ethnic minority parents to increase their support for FDS programs.

Improving coordination between school/teachers and pupil/parents/community

Acknowledging the important role of parents' associations, SEQAP has hired Community Coordinators to bridge and reinforce the links between these associations and minority groups. Ethnic parents have become involved in various activities in the school environment. For example, they were encouraged to participate in school governance and education activities to collect ideas and develop opinions on pressing education issues. They also joined in communicative activities, such as festivals, performances, learning competitions, campaigns, and other events to enhance understanding of child rights and the right to education (World Bank & MOET, 2009).

This project also conducts training courses for ethnic students within local and cultural contexts that support them in preserving their ethnic cultural identity. Some students' extracurricular activities based on their daily life skills were also introduced into the formal school curriculum to enable students to adapt to modern environments, as necessary (World Bank & MOET, 2009).

2.4.2.3. Improving Quality Basic Education for Ethnic Minority Children Project

Starting in 2010, teachers, in particular Kinh teachers, in three disadvantaged provinces (Yên Bái, Điện Biên, Quảng Trị) in Việt Nam have received many benefits from the Project Improving Quality Basic Education for Ethnic Minority Children, funded by Save the Children in coordination with the MOET (World Bank, 2013).

Under the project, primary school teachers are supported by local teaching assistants who assist in instructional language, explaining difficult concepts or knowledge to minority students in the classroom. In addition, in selected schools, ethnic minority students study in their mother tongue language, and Tiếng Việt is taught as a second language (World Bank & MOET, 2009, World Bank, 2013).

Many ethnic minority parents were invited to join the project, co-coordinating with teachers to support their children to create personalised storybooks. The content of these storybooks is relevant to the ethnic minority group's daily lives and their intellectual knowledge. The report of this project (World Bank, 2013) stated that the children became more enthusiastic about reading and this, in turn, helped them improve their Tiếng Việt capabilities. The report of World Bank (2013) also affirmed that the use of ethnic costumes, artefacts, props from festivals and musical instruments, has been gradually increasing in primary classrooms as teaching and learning aids that facilitate motivation and classroom engagement of ethnic minority students.

However, many policies designed for ethnic minority groups have been deemed insufficient and incongruent (Baulch et al., 2007), and have not achieved the target of narrowing inequality between the majority and minorities (Truong Huyen Chi, 2011a). In addition, many programs and projects may have been overlapping or too general for ethnic peoples (Baulch et al., 2007). Dang Hai Anh (2012) asserted that the effectiveness and cost/benefits of programs or projects were

rarely evaluated and ethnic minority parents seldom took part in planning development projects, rarely learning the expected benefits of projects when they were implemented (Baulch et al., 2007). Constraints to be faced in applying and implementing policies and educational programs for ethnic minority students are discussed in the next section.

2.5. DIFFICULTIES ARISING FROM POLICIES AND PROGRAMS FOR ETHNIC MINORITY STUDENTS

Despite diligent effort, the language, knowledge, and cultural diversity of ethnic minority groups have not yet successfully integrated into the curricula and teacher training programs of educational institutions.

Although Article 5 of the 1992 Constitution of the Socialist Republic of Việt Nam guarantees the right of ethnic minority groups to their own language, and opportunities to incorporate it in their schooling, Tiếng Việt is in practice the sole official language of instruction in all primary schools nationwide, with the exception of selected provinces developing the MTBBE program for certain grades (UNICEF & MOET, 2012; Nguyen Thi Thuy Trang & Hamid, 2018). In addition, Djité (2011) showed that although the official language policy in Việt Nam aimed at multiple goals, including (1) encouraging minorities to learn Tiếng Việt, (2) maintenance minority languages, and (3) language equality, the first goal was still more important than others. Phan Le Ha et al. (2014) observed that teaching Tiếng Việt was more emphasised to minority students than maintenance of their ethnic minority mother tongue through teaching.

As Truong Huyen Chi (2011a) and UNICEF (2015) reported, the bilingual programme was limited to a number of provinces at the local level. Lavoie (2011) has also admitted that there were then few early childhood and primary schools in ethnic disadvantaged areas implementing this ethnic language policy, for reasons relating to a lack of materials or other resources for teachers and students. Baulch et al. (2007, p. 1175), for example, had previously shown that only 10 of the 334 ethnic primary schools had opportunities to study lessons in ethnic minority languages, and Tiếng Việt officially remained the dominant language of instruction and textbooks. Furthermore, Truong Huyen Chi (2011a) showed that native languages were only taught as a subject in school but not used as a language of instruction in classrooms nationwide. This remains

a challenge to the implementation of this project in disadvantaged ethnic schools.

Interviews of many primary teachers suggested they were ill-prepared to apply the proposed active measures (Dang Phuong Thao & Boyd, 2014). In addition, most native teachers or local assistant classroom teachers using local language did not receive any official training courses in language or pedagogy (Truong Huyen Chi, 2009). UNICEF and MOET (2010) also stated that bilingual education for ethnic students in schools requires more concerted efforts that have previously been piecemeal, without well-documented results. As Nguyen Thi Thuy Trang and Hamid (2017) pointed out, where language policy and other social, economic, and political aspects of the majority group (Kinh) dominate, there was little focus on minority languages and minority people.

Benson (2016) stated that it was difficult to see how the current pilot multilingual education approach could be applied more widely, because went goes against current policy by using each non-dominant language as a medium of instruction and teaching Tiếng Việt as an additional language. In addition, the World Bank report (2013) indicated that most teachers lacked of the skills and capacity to teach Tiếng Việt as a second language.

Key issues raised by the literature in this section are the significant problems emerging in teaching ethnic minority students, especially H'Mông primary students in Việt Nam, due to differences in language, cultural knowledge and perspectives between minority groups and educators and teachers who are Kinh. This section has also discussed educational policies, and Vietnamese government programs in an attempt to explore minority students' language and cultural FoK and their interests in order to enhance the quality of their study and reduce inequality in the education of ethnic minority students. However, as discussed above, the utilisation of these policies has been inconsistent in teacher education and in schools.

To follow is an evaluation of the literature reviewed in the previous two sections, and a synthesis of the argument to emerge from the review of this research literature. An interpretative evaluation will be added and these studies will be recast to connect directly with the research questions driving this study. As will be argued in the next section, there are gaps in the literature reviewed here, as well as questionable assumptions.

2.6. EVALUATION OF THE LITERATURE

This review of the literature pointed out the educational challenges for ethnic minority groups and the teachers who teach them in Việt Nam, particularly HMông children, which have lead to poor quality of teaching and learning in school.

These constraints include (1) biased school curriculum and textbooks; (2) language barrier; (3) poor pedagogical practices; (4) lack of teacher resources and professional training; and (5) deficit thinking toward ethnic minority students. These five major issues hinder teachers, especially Kinh primary teachers, whose different language and cultural knowledge guide their approaches to and uses of teaching practices that fail to appropriately draw on the language, cultural knowledge and experiences of ethnic minority students.

Discussion of the strategy and plan to reduce inequality of quality education between minority students and Kinh children in Việt Nam has made clear that developing a capacity in teachers and pedagogical methods based on ethnic minority students' language, cultural knowledge, identity and daily knowledge, as well as other resources, is a key policy requirement. Although educational policies regarding ethnic minority students in Việt Nam reveal the FoK approach was initially introduced using various strategies in school settings, as discussed above, the appropriate exploration and implementation of ethnic minority students' knowledge and other values in school settings are still highly questionable when their relevance and application is examined. In addition, although the policy contains references to FoK, there are inconsistencies in its uses in teacher education and in schools. In reality, these Vietnamese education policies tend to ignore and underestimate cultures and languages of minority students in teaching practices.

The literature reviewed has largely emphasised use of the language and culture of ethnic minority people as an appropriate strategy for teaching minority students. However, it is not explicit about how to employ ethnic minority students' FoK as academic knowledge in the formal teaching and learning process. Since HMông primary students have continued to struggle in their studies, it is probable that current approaches to teaching and learning in HMông classes will, without change, continue to fail providing sufficient support.

The review and discussion in this chapter suggest that a FoK approach that explores and integrates disadvantaged and ethnic students' knowledge and daily practices into classroom settings must be considered as a teaching method to foster ethnic minority students' study in the Vietnamese context. The review of the literature also shows that in order to discover and justify the use by Kinh teachers of FoK of HMông students, there is a need to explore what Kinh teachers say, intend and do/practice, in relation to their HMông students' FoK.

The way Kinh teachers interpret the FoK approach as an educational philology and implement it in the everyday teaching practices of their ethnic minority students has been inconsistent. Differences of language and culture background between Kinh primary teachers and ethnic minority students and deficit thinking of teachers toward ethnic minority groups might influence these teachers' attitudes and practices or commitment to the FoK approach.

In the context of education, recognising and valuating culturally diverse students and their identities are more than ever considered as a central requirement for sustainable development. Transformative academic knowledge and the knowledge, practices and values students acquire in their daily life are needed to reduce inequality in the educational sphere (Palaiologou & Dietz, 2012). Therefore, mindful of research questioning FoK (Andrews & Yee, 2006; Zipin et al., 2012), it is necessary for teacher education to address minority students' FoK, as it is central to overcoming disparities in school experiences and study outcomes among ethnic minority groups.

As an early stage researcher I am aware of potential biases in literature reviews, including the language (Tiếng Việt) in which research is or is not published (Lyons, 2016; Mulimani, 2019). The writer understands the inclination for research rendering significant results to be published. Because research findings of minor significance have less chance of being published, available studies for literature review tend to be a biased sample, which arguably inflates their effect and impact on published research. For instance, Ropovik et al. (2019) found that meta-analyses in educational research neglected publication bias correction. While the studies reviewed above did not indicate whether they attempted to track down elusive unpublished literature for review, I tried to locate unpublished studies on the topic of this study, albeit with little success, to correct for this bias. For this reason, a conservative interpretation of literature reviewed presented here is warranted.

This review of the literature did not simply occur at the commencement of this research study; it was not completed when the proposal was completed for the Confirmation of Candidature. Work on this literature review has been ongoing, only deemed completed upon the finalisation of the thesis. Moreover, as noted above, the results of this literature review have been integrated into the body of the thesis, especially at appropriate points in the data analysis chapters, as well as in the discussion of the findings, implications, and recommendations in the concluding chapter.

The function of the literature referred to in this thesis is to assist the analysis of evidence and discussion of the research findings through direct and thoughtful links between the evidence and the findings. From the literature review this researcher explores findings that are consistent and/or different with those in other studies. For example, Chapter 5 discusses Kinh primary teachers' perspectives of HMông students' mother tongue and the study's findings confirm previous literature that points out instances of deficit thinking toward minority groups' language and cultural knowledge of teachers and educators.

2.7. CONCLUSION

Chapter two draws on important literature that is relevant to the study culturally and in terms of the pedagogies required for a FoK frame. The literature provided insights into the unevenness of quality education between minority students and Kinh children in Việt Nam. Importantly, the literature has shed light on teacher capacity and pedagogical methods surrounding ethnic minority students in terms of language, cultural knowledge, identity, daily knowledge, and resources. Absence of content regarding teacher knowledge of ethnic groups' languages combined with the lack of culturally sensitive pedagogies is identified as contributing to the lack of progress among ethnic minority groups. Following literature review methods (Section 2.2), this chapter pointed out key issues that motivated this study and the research questions.

Firstly, in terms of teaching ethnic minority education in Việt Nam, significant issues are the absence of recognition and valuation of the language and intellectual knowledge and cultural values of minority students (minority students' FoK), and their community in school settings. In accessing education, ethnic minority students, especially HMông children in Việt Nam, are

disadvantaged by national curricula and textbooks; teachers' pedagogical practices; teacher resources; teacher professional training and education; and teachers' and educators' perspectives of minority groups (Section 2.3).

Secondly, educational policies regarding ethnic minority students in Việt Nam reveal the FoK approach was initially introduced using various methods whereby teachers' explored and implemented ethnic minority students' FoK in school settings (Section 2.4). This remains highly questionable in regard to its relevance and application (Section 2.5). Thus, the evaluation of this literature justifies investigation of the main research question. Given the review within the field, it is necessary to inquire further into a FoK approach to explain and justify its potential uses by teachers working with disadvantaged and minority students. This will be Chapter 3.

CHAPTER 3. CONCEPTUAL FRAMEWORK FOR INVESTIGATING FUNDS OF KNOWLEDGE IN TEACHERS' PRACTICES

3.1. INTRODUCTION

This thesis makes an original contribution to knowledge regarding Kinh primary teachers' curriculum uses of HMông students' FoK, by investigating, testing and developing a FoK conceptual framework for use in teacher education.

Beyond the main points made about challenges in teaching ethnic minority students in Việt Nam within an ethnic minority education policy context, it is necessary to more deeply understand issues relating to a FoK approach, a valued educational resource for low-income, ethnic and disadvantaged communities.

In particular, the literature reviewed in this chapter focuses on key issues. It begins with the literature review method to cover selection criteria that are relevant to the field of FoK and focus on the study (Section 3.2). Second, Section 3.3, "Background to a funds of knowledge approach in education", explains the origin of the FoK approach in which students' FoK was initially considered a potential educational resource. Third, the theoretical framework for funds of pedagogical knowledge is provided in Section 3.4 to identify important concepts and points emerging from current applications of the FoK approach, and which are actually used in the data analysis chapters. Fourth, the connection between the FoK approach and sociocultural learning theory and culturally responsive teaching and learning is discussed in Section 3.5, "Funds of knowledge, and its connection to socio-cultural learning theory". Fifth, intellectual knowledge of the HMông in the context of Việt Nam is discussed in Section 3.6, "HMông intellectual knowledge". Finally, in Section 3.7, an evaluation of the strengths and weaknesses of recent, relevant research on FoK is provided to explain and justify the focus for this particular study.

Due to the sociocultural and historical context in which this study was conducted, not all aspects of the FoK approach raised in the literature provided an appropriate focus for investigation. Specifically, Section 3.6 provides an evaluation of the FoK literature that brings to the fore the focus for this study.

3.2. METHOD FOR REVIEWING FUNDS OF KNOWLEDGE THEORY

In order to undertake a sufficiently comprehensive review of the research literature on FoK, this chapter focuses on FoK studies that are relevant to inservice teachers' uses of students' FoK in the school curriculum. This researcher used the search engines and databases of ERIC, PsycINFO, Google Scholar, and the Social Science Citation Index with the search term "funds of knowledge".

First, the author has limited the search to journals and articles appearing in the past decade (2009-2019), as these confine focus to more up to date reviews. However, earlier landmark studies related to FoK are also referred to (e.g. Moll et al., 1992; González, 2005).

Second, included articles were initially only those intensively concerned with *teacher learning*, *teachers' uses*, *teacher practices*, *teacher education* and/or *teacher pedagogy* that related to the writer's topic of interest. Although articles directed to primary teachers' curriculum uses of students' FoK are top priority, those reported are too limiting. It was therefore decided to augment the criteria for analysis to encompass articles related to teachers' practices that involve students' FoK. The review includes research related to all teachers at different educational levels. While acknowledging differences between Kinh teachers and other inservice teachers, search terms have also been included that relate to studies with pre-inservice teachers, as these findings might inform the understanding of inservice teacher learning, particularly in those areas where specific research on inservice teachers was lacking. Therefore, search terms included teachers, pre-inservice teachers, inservice teachers, primary teachers, and teacher education.

Third, terms that related to teachers, primary teachers and teacher education were combined with terms relating to specific interests in ethnic minority students' and their families' FoK. Although articles regarding ethnic minority primary students' FoK -- such as ethnic minority communities, ethnic minority households, and ethnic minority students -- remain the priority the decision was

made to widen the criteria for analysis due to limitations of available articles. Thus, search terms included disadvantage students, low-income students, disadvantaged communities, and/or low-income households.

Fourth, in the curriculum areas, the application of FoK across different subjects showed literacy to yield the largest number of researchers, followed by other areas, including: mathematics, science, history and social studies, social studies and social justice, technology, sustainability, geography and health (Hogg, 2011; Hogg, 2013; Llopart & Esteban-Guitart, 2017). However, the current study focuses on Kinh primary teachers' curriculum uses of HMông students' FoK, thus, teacher interviews were undertaken to discover the array of school curricula that Kinh primary teachers followed in their teaching practices.

Finally, geographical limitations of FoK research in Việt Nam required the inclusion of international research articles on teacher learning and applying of students' FoK in other regions. Such a broadened geographic scope for FoK research in this study could provide a deeper insight into the writer's specific areas of interest.

3.3 Background to a funds of knowledge approach in education

This section begins by describing and situating the FoK framework through the background of FoK. The term 'funds of knowledge' was coined by Wolf (1966) in his work titled *Peasant*. In this study, Wolf addressed resources, knowledge, or 'funds' that were used to support low-income, internationally situated families in their respective societies. For example, some types of funds identified by Wolf (1966) were funds for rent, ceremonial funds, and social funds.

In the late 1980s and early 1990s, the 'Tucson academics' (Hogg, 2011, p. 668) -- researchers Luis Moll, Norma González, James Greenberg and Carlos Vélez-Ibáñez at the US University of Arizona, Tucson -- identified and reported on a variety of strategic practices relating to FoK concepts in relevant to school settings (Velez-Ibanez, 1988; Moll & Greenberg, 1990; González, 1995).

The main purpose of Moll et al.'s work (1992) was to justify how school experiences of “students whose households are usually viewed as being ‘poor’ not only economically but in terms of the quality of experiences for the child” (p. 132) could be improved. In the book titled *Funds of knowledge theorizing practices in households, communities, and classrooms*, Moll et al. (1992) emphasised the critical need for teachers to familiarise themselves with the knowledge and experiences of their students' households as a new approach to learning.

The objectives of the original FoK notion based on the research of González et al. (2005) are:

1. to improve the academic performance of students they considered as underestimated by the dominant culture and the school system;
2. to improve relationships and cooperation between students/family and teachers/school through discovering students' FoK from visits to the students' homes;
3. to adjust teaching practices by designing curriculum units based on the FoK discovered from students and their family.

Rodriguez (2013) reviewed in his study that early views of these researchers were that the FoK approach could be considered a potential educational resource that:

1. fights against barriers of cultural deficit views regarding economically, linguistically, and socially diverse students and families;
2. informs innovation in teaching practice;
3. improves the learning experiences of different students;
4. seeks to use an inquiry process that would support teachers to learn more about the sources of their students and parents' lives in out-of-school contexts;
5. connects the knowledge production beyond the school to that occurring within the school.

However, Rodriguez (2013) pointed out that in the minds of contemporary FoK scholars, previous FoK reviewed focused more on the educational potential of students' FoK in terms of content and curricula. There seems to have been less attention given to the pedagogical and epistemological

practices drawing on students' daily knowledge and lived experiences within their family and community. Hence, in the next section, a theoretical framework for teachers' pedagogical funds of knowledge that focuses on the main research questions and the aim of the research is discussed, in relationship with the data analysis chapters.

3.3. TEACHERS' PRACTICES FOR USING FUNDS OF KNOWLEDGE

This section discusses key concepts of teachers' practices for using a FoK approach that is considered to offer valuable educational potential in teaching ethnic minority students. These include: (1) sources of FoK; (2) methods to identify students' FoK; (3) teachers' funds of pedagogical knowledge; and (4) educational outcomes from drawing on a FoK approach.

3.3.1. Sources of funds of knowledge

Differences in definitions of the sources of FoK terms are highlighted across FoK reviews. First investigated are the differences in FoK definitions in terms of the sources of FoK. Hogg (2011) has reported that sources of knowledge are contested. The research of Hogg (2011) shows three definitions as the foundations of FoK according to the Tucson academics. In addition, there have been slightly different expressions of these three foundational definitions of FoK. In the Table 3.1, Hogg (2011) investigated a list of studies that have used specific definitions.

The definition of FoK most initially and widely used in the literature (Hogg, 2011) is that provided by Moll et al. (1992, p. 134), who defined FoK as "historically accumulated and culturally-developed bodies of knowledge and skills essential for household or individual functioning and well-being". According to this definition, the sources FoK are bodies of knowledge and skills that are strategically important for individual and household functioning to improve life quality.

Table 3.1: Contested definitions of funds of knowledge (adapted from Hogg, 2011)

Key definitions of FoK	Variations on FoK
<p>“Households must manipulate (several funds) for subsistence and development...Each of these...entails a broader set of activities which require specific knowledge of strategic importance to households. These bodies of knowledge are what we call Funds of Knowledge” (Moll & Greenberg, 1990, pp. 322-323).</p>	<p>“different Funds of Knowledge (Moll, Velez-Ibanez & Greenberg, 1989) such as homes, peer groups and other systems and networks of relationships that shape the oral and written text young people make meaning of and produce as they move from classroom to classroom and from home to peer group, to school, or to community” (Moje et al., 2004, p. 38)</p> <p>“Knowledge and skills gained through historical and cultural interactions that are essential for individuals to function appropriately in his/her community...including knowledge about any activities or interactions that take place in homes” (Upadhyay, 2005, p. 96).</p> <p>“knowledge, skills or learning which resides or takes place in minority ethnic communities within multi-ethnic populations in countries such as the US” (Andrews & Yee, 2006, p. 436).</p> <p>“funds of linguistic and cultural knowledge” (Fitts, 2009, p. 88).</p>
<p>“historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and wellbeing” (Moll et al., 1992, p. 134).</p>	<p>“everyday experiences, events, activities, observations, accounts and recollections...shaped by and shaping the children’s own private worlds and home lives...life experiences in general...represent an important dimension of the resources children bring with them to classrooms” (Varelas & Pappas, 2006, p. 221).</p> <p>“extended the term ‘Funds of Knowledge’ so that it applied to teachers as well as to parents and families” (Hughes & Pollard, 2006, p.389).</p> <p>“the cultural resources and competencies that we bring to other settings eg home stories built into children’s writing and drawings” (Rowse, 2006, p. 147).</p> <p>“knowledges embedded in the labour, domestic, family and community practices of border-crossing Mexican American families” (Thomson & Hall, 2008, p. 88).</p>

<p>“Funds of knowledge is based on a simple premise...that people are competent and have knowledge, and their life experiences have given them that knowledge” (González & Moll, 2002, p. 625).</p>	<p>“historical and cultural knowledge” (p. 468). May be particular to a family eg knowledge about care of elderly, also disposition, values. Affected by personal context, life experience, which affects individual’s disposition/values as well as knowledge and skills (Basu & Barton, 2007, p. 468).</p> <p>“diverse FoK that are grounded in students” membership and experiences in out-of-school worlds that they inhabit” (Barton & Tan, 2009, p. 52).</p>
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The above definitions share a similarity that considers FoK as knowledge and skills explored in and out of school settings, particularly households, daily activity practices, social communications, and labour history. However, compared to previous definitions that merely viewed FoK as functional, Hogg (2013) shows that the latter views of FoK highlight both the nature of FoK, and the role of activities and daily practices in its development.

As such, FoK “are always open to transformation” (Moll et al., 2013, p. 181) to direct dynamic social, economic, and political circumstances. It means FoK should be understood as different from notions of FoK as “culture” that is consistent, static, and bound, and instead pursue analyses of “cultural practices” that represent traditions and historical context but remain dynamic in the current context (Rodriguez, 2013). This brings together particularities in the approach to the definition of FoK that emphasize aspects, such as popular culture and the students’ interests, as a potential educational resource to link the students to the curriculum content.

Petrone (2013, p. 246) identified three key concepts of students’ popular culture FoK in the relations with literacy instruction in K-12 classrooms. The concept of popular culture are considered as (1) a site of intellectual, aesthetic, and political engagement for youth; (2) a context for using and developing literacy; and (3) a vehicle for resistance to and incorporation into normativity.

Varelas and Pappas (2006, p. 221) re-conceptualise FoK not as knowledges-embedded households, but as children's everyday life experiences "shaped by and as shaping the children's own private worlds and home lives" that are considered resources children bring to school.

Hedges (2011) and her colleagues developed the notion of *children's FoK-based interests* in the early school setting in an Aotearoa/New Zealand context (Hedges, 2011, 2012, 2015; Hedges et al., 2011; Hedges & Cullen, 2012; Cooper & Hedges, 2014) for developing curriculum design. Their findings pointed out that children's interests constructed through interaction with their family members, teachers, friends and peers in every day experiences provide them opportunities to develop their FoK. In turn, *children's FoK-based interests* become a potential resource for extending curriculum design with knowledge based on culture, such as literacy, maths, and science.

In this case the concept *funds of identity* also emphasizes students' interests, knowledge, and skills for school practices (Saubich & Esteban-Guitart, 2011; Esteban-Guitart, 2012; Esteban-Guitart & Moll, 2014a, 2014b; Jovés, et al., 2015). However, this notion focuses on different aspects of students' interests, including: geographical (spaces), social (people), cultural (artefacts) or institutional (locations) (Llopart & Esteban-Guitart, 2018). Moll (2005) argued that household FoK fail to provide enough information about students' FoK because they inhabit their own personal worlds, which involve various independent activities and settings. Thus, Llopart and Esteban-Guitart (2018) suggested that both *children's FoK-based interests* and the *Funds of identity* notion extend the FoK concept by expanding learners' experiences and social networks that go beyond their family FoK.

Moll et al. (1992, p. 139) were conscious that FoK should be considered to include daily life skills, expertise and knowledge that need to be recognised and valued in school and avoid perceiving FoK as cultural capital that represents "folkloric displays such as storytelling, arts, craft and art performances". Therefore, it should reside or sustain within the family unit, drawing on "what people do and what they say about what they do" (González et al., 2005, p. 40).

However, Saubich and Esteban-Guitart (2011) stood against the notion that FoK should be extended, and support the *funds of identity* concept. These researchers pointed out students' "identity is embedded in tangible, historical cultural factors such as social institutions, artefacts and cultural beliefs" (Saubich & Esteban-Guitart, 2011, p. 98). These authors argued that those cultural features still embody and energise the FoK notion. As Esteban-Guitart and Moll (2014a, p. 37) stated, in support, "funds of knowledge are the funds of identity when people use them to define themselves".

From above discussion, thus, the current research has decided to use the notions *funds of knowledge* and *funds of identity* to explore a sufficiently comprehensive source of FoK of HMông students and their community.

Finally, an important concept in the FoK definition is the notion of *dark FoK* (Zipin, 2009). This author suggested the concept of *dark FoK* to account for disadvantaged and difficult conditions around the lives of students such as violence, poverty, racism, bullying, and discrimination. In previous FoK research, the sources of knowledge, skills, and resources of students and their families usually earmarked for integration into school curricula and teaching practices are generally positive (Hogg, 2011; Rodriguez, 2013). Zipin (2009) argued for extending the sources of FoK to include *dark FoK*, claiming that this form of knowledge emanates from the disadvantaged conditions experienced by students, families, and communities from vulnerable socio-economic backgrounds. Included could be, for example, poverty, violence, mental health issues and racism, subjects often absent from school curricula. Their resilience and resistance to hardship could become valuable knowledge to help engage students and revitalise the teaching and learning process (Zipin, 2009; Zipin et al., 2012; Zipin et al., 2015). As Templeton (2013) noted, there is a need to take account of the living conditions of students and difficulties arising from everyday life in order to help teachers to develop a deeper understanding of their students as whole persons and reduce deficit thinking or prejudices affecting their students' study.

A further point of the differences in FoK definitions relates to the issue of whose knowledge. When defining FoK, raising the question of who the holders of FoK really are Hogg (2011, p. 672) presented the various of attitudes of those whose knowledge could be included in the FoK concept, such as household members; households-teachers; students-parents-other adults in the

community.

It can be seen that nominated household and community FoK seem to be contexts in which children can learn, but these neither acknowledge nor extend the FoK of students (González & Moll, 2002; Zipin, 2009). Now, bearing in mind that Moll and Greenberg (1990) argued that children actively conduct their own learning, a study by Moje et al. (2004) can be offered as an example supporting the idea of extended consideration of the meaning of FoK. The research centered on 12-15 year-old Latino students from low-income families in the US and disclosed that the students' FoK was also formed around "homes, peer groups and other systems and networks of relationships" (p. 38). In this view, the peer groups and other relationship networks formed in daily life practices in their communities and popular culture would be a source of children's FoK that goes beyond their specific family experiences.

In terms of community FoK, Carmona and Bernal (2012) showed the study of community FoK has been effectively applied to elementary school students. Through the assignment of oral history tasks to the exploration of familial and cultural knowledge of the disadvantaged community where the students live, teachers developed a deeper understanding of the students' parents and their surrounding community that could enhance solidarity among the teachers, parents, and students (Carmona & Bernal, 2012).

However, Zipin et al. (2012, p. 185) cautioned about the need to be mindful that communities should be considered as "spaces where kids hang out together", not "a co-ordinated group of people with some traditions and understandings in common", as in Gutiérrez and Rogoff's (2003) definition. In considering minority ethnic parental cooperation in their children's education, Vincent (1995) argued that schools and researchers should avoid viewing communities as fixed or static and that ethnic minority communities' FoK need to be considered alongside the different types of FoK during exploration of the relationship between communities' cultural knowledge and learning practices at school. Indicating a shift, Hogg (2013) stated that in regard to conceptualizations of community FoK, there are challenging researchers and teachers exploring students' FoK within complex and diverse communities.

Oughton's (2010) conceptual critique of FoK identified potential problems with the stereotyping of cultural or ethnic groups; the metaphor of "funds" and the imposition of cultural arbitraries. Because schools centre FoK on observable and tangible cultural markers, case study methods are recommended as a way to minimise the risk of portraying students and their families as homogenous and possessing fixed cultural traits. The term "funds" has become associated with neo-liberal economics. Oughton (2010) argued for funds to be connected with learning through the acquisition of knowledge, especially the participatory learning processes whereby students become members of extended communities. Finally, there is a need for cautious awareness of the danger of replacing the official, privileged curriculum knowledge with the intellectual resources privileged by researchers or teachers, despite the claims regarding the students' family and community.

3.3.2. Methods for identifying students' funds of knowledge

According to Moll (2014), among this diversity of approaches, home visits are the popular method of inquiry, characterised as "the funds of knowledge methodology" (González, 1995, p. 238). This means that teachers supported by researchers visit the households of their students to learn and collect information from their families with an "ethnographic eye" (González et al., 2005) and then form a "study group" in which teachers can discuss and review their findings with researchers, to employ FoK in the classroom (Moll, 2014, p. 123).

González et al. (2005) described the process in which teachers collect data during home visits with researchers' support. This includes the following main strategies:

1. Before home visits: training in ethnography
2. During home visits: questionnaires with guidelines for interviews in order to bring clear expectations for the next step in the study group for teacher participants and researchers.

It is noteworthy that home visits are different from entering homes for students' academic purposes or regarding behaviour (Moll, 2014). For example, in a project by Cremin et al. (2012) researching primary teachers' relationships with their students' everyday literacy practices and

FoK approach, teachers undertook “learner visits” to explore students’ own literacy histories and practices at home. Finally, based on their knowledge and understanding collected from home visits, teachers have new knowledge to build on in the context of their classroom practices and home-school relations.

Home visits bring different benefits to the teaching and learning process. First, by recognising and valuing cultural knowledge, home visits shed light on the typical conditions and living practices of students, and new relationships between teachers, parents and students are developed through mutual trust (González & Moll, 2002; González et al., 2005; Llopart & Esteban-Guitart, 2018), which is key in the original FoK approach, as well as increased feelings of connection (Riojas-Cortez & Flores, 2009).

Second, in home visits, teachers become learners or researchers in order to facilitate their understandings of students’ and families’ intellectual resources and then innovate their teaching practices in the school environment (Moll et al., 1992; Rodriguez, 2013). At this point, teachers’ visits break with the traditional perception in which the teacher is considered to be the expert who informs of students’ study performances (Rodriguez, 2013). Moreover, when teachers conduct visits to students’ households, discontinuities that children can experience between informal knowledge at home and formal knowledge at school could be reduced due to teachers’ recognition of students’ cultural heritage and family background (Saubich & Guitart, 2011).

3.3.3. Funds of pedagogical knowledge

The main idea of a FoK approach is that the practices and knowledge of various households, regardless of social status, ethnicity, linguistic and economic conditions, are characterised, developed and employed as cultural resources for teachers’ practices in schools. Fraser-Abder et al. (2010) stated that funds of knowledge could create an opportunity that enables teachers to help their students make connections between academic knowledge they learn in school and out-of-school knowledge and experiences they have at home.

This section has highlighted the role of teachers and their pedagogical practices in validating and implementing students’ everyday knowledge, practices, and cultural resources in the teaching and

learning process. Table 3.2 shows a summary of key elements in pedagogical applications of FoK (Rodriguez, 2013).

Table 3.2: Pedagogical practices for using students’ funds of knowledge (adapted from Rodriguez, 2013)

Three key themes	Describing
Engaging students in the co-construction of knowledge to deepen or extend academic knowledge through FoK.	Pedagogy as perspective and relevance across social/cultural/historical contexts.
Recognising and encouraging utilisation within the classroom of multiple FoK among students, including home/ family FoK as well as youth and popular culture FoK.	Pedagogy as resistance to schooling hegemonies (particularly to cultural deficit thinking) and as relationship and interaction that promote a sense of humanity.
Moving beyond solely the connection between student/family/community FoK and academic content and instruction to a process of classroom transformation involving the reorientation of both teachers and students as learners and agents within and beyond the classroom.	Pedagogy as micro- and macro-level consciousness and as a conduit for personal, institutional, and societal transformation.

Regarding the first theme, pedagogy is concerned with the teachers’ co-construction of knowledge with their students to extend and deepen the latter’s academic knowledge (Upadhyay, 2005; Upadhyay, 2009; Barton & Tan, 2009; Henderson & Zipin, 2010; Marshall & Toohey, 2010; Chesworth, 2016). For example, Barton and Tan (2009), using a low-income school as an example, explored how teachers and students worked to combine students’ socio-cultural worlds with the science curriculum. Experiences and daily-lived realities among peers of students in their families and communities in regard to food were employed to incorporate science content in a unit of food and nutrition. In a US school context a HMông teacher named Lee pointed out that her HMông students’ culture, especially lived experiences where gardening has a “spiritual significance” (Upadhyay, 2009, p. 225) would become resources for teaching science. She also showed her confidence and belief that using HMông students’ experiences not only supported her

instructional practices in science, but also helped HMông students “look at Science not as a difficult subject but a subject that was connected to their lives” (Upadhyay, 2009, p. 224).

In another example of efforts being made to introduce FoK into their classrooms, Ewing (2012) described how teachers incorporated the knowledge and cultural practices of Torres Strait families in Australia (e.g. traditional practices of sorting shells and giving fish) into maths classes. He pointed out that a process involving fish being sorted into groups by weight through hefting, and sighting their length and girth provided opportunities for children to study and learn about sorting, sharing and dividing in a maths subject. Along the same line, Turner et al. (2016, p. 68) enhanced children’s mathematics learning in school by drawing on the “children’s multiple mathematical knowledge bases” in their community and culture.

The following example describes how teachers bring students’ cultural-familial knowledge into school curricula. With teacher support (most of them are white or of different background from their students), students and their families (mostly people of color, immigrant students or disadvantaged students) collected their oral histories and family tales such as stories of their names, their familial events, or genealogical research and then used literacy time to write and illustrate their findings in oral history assignments (Carmona & Bernal, 2012).

In the final example, Mantei and Kervin (2014) suggested the valuable pedagogical approach of using *picture books* in making connections between Year 4 students’ out-of-school knowledge and the school curriculum. Through the students’ sharing, connecting with and responding to picture books, the teachers have opportunities for a deeper insight into their students’ FoK and their teaching pedagogies are empowered (Mantei & Kervin, 2014).

As Rodriguez (2013, p. 95) noted, the process of engaging students in the co-construction of knowledge requires “pedagogy as perspective and relevance across social/cultural/historical contexts”. Thus, the current study expects to explore Kinh primary teachers’ pedagogical practices in co-constructing and integrating HMông students’ FoK into school curricula while teaching HMông primary children in the context of Việt Nam.

The second theme is that multiple FoK sources of students can be equally valued in different

subjects (Barton & Tan, 2009; Rodriguez, 2013; Jovés et al., 2015). Examples could include developing children's classroom mathematics learning by drawing on mathematical knowledge in their community and culture (Aguirre et al., 2013; Turner et al., 2016); developing the geography curriculum by adopting a historical-cultural lens for viewing students' own lives (Firth, 2011); literacy and academic achievement linked to Latina/o students' and their parents' different activities in the community (Rios-Aguilar, 2010); literacy (Cremin et al., 2012) and science (Licona, 2013). These studies are intriguing examples of multiple FoK used to create pathways into school curriculum subjects. This theme is to be viewed from the perspective of equity when using a FoK approach in education settings. In essence, the FoK framework has to be applied equally across a variety of subjects using different forms of FoK.

In a different setting, teachers employ FoK approaches to facilitate multiple sources from their students. Marshall and Toohey (2010) explored the controversial issue over why 73% of elementary Punjabi Sikh children -- whose mother tongue was Punjabi -- were not taught in their own language in a school context in Canada. They questioned what happens when those students' FoK conflict with schooling settings. In this project, teachers required the students to draw upon their grandparents' childhoods and recontextualise them for contemporary settings and experiences that the children could identify with. The study discussed how the children might use family FoK and popular cultural resources to represent their hybrid experience as immigrant children in North America.

In another example, Thomson and Hall (2008) pointed out that lack of students' home and family knowledge in the context of the English primary national curriculum, which does not make space for recognising and incorporating their knowledge and resources. These authors suggested possibilities and difficulties for implementing a FoK approach within restrictive school curricula.

At this point, the national primary curriculum in Việt Nam has similarities with the English national primary curriculum. For ethnic minority students in remote primary schools, one must wonder whether or not Kinh primary teachers will be able to tap into H'Mông students' and their families' FoK and scaffold their academic knowledge into the school curricula. Whether Kinh primary teachers can overcome difficulties in term of school curriculum and textbooks in order to recognise their resources for teaching purposes is an issue calling for investigation in this study.

Equality in the FoK approach is a second theme that can transform the power structure between teachers and students and flatten traditional approaches, which tend to be top-down (teacher-to-students) (Barton & Tan, 2009). This means that a FoK approach provides opportunities for student participation and discussion in the teaching and learning process. Barton and Tan (2009) referred to “*hybrid spaces*”, where students’ FoK circumvents this rigidity and expands the boundaries of official school discourse. For example, Barton and Tan (2009, p. 69), referred to a food and nutrition study where teachers gave their students increased opportunities to contribute their knowledge and experiences in school discourse and academic science knowledge as “experts”. In a “*hybrid space*”, the teacher acts ostensibly like a “co-learner” to coordinate with students in exploring new knowledge in the topic. As Rodriguez (2013) stated, pedagogical FoK can be perceived as assisting resistance against cultural deficit thinking while contributing to human equality.

The third theme is where the FoK pedagogical dimension is considered as a process of classroom transformation (Rodriguez, 2013). As Hogg (2013, p. 39) noted, applications of this theme are “authentic learning activities” that try to link with the real world for real life purposes. For example, Mien students created picture books by using MP3s for recording and transcribing their Indian grandparents’ stories of earlier life (Marshall & Toohey, 2010). In the study of Henderson and Zipin (2010), the authors identified concerns of students in their local community context through the process of making clay animation videos based on their lives. In that study, the teacher explored violence in their lives connected to their poverty and cultural differences, and also identified hidden ethical issues for both students and schools in legal institutional terms.

3.3.4. Educational outcomes arising from teachers’ uses of funds of knowledge

Teachers applying a FoK approach could provide valuable outcomes for teacher professional development and for the achievement of students considered underrepresented due to poverty, ethnic minority status, non-dominant language group membership or foreign background (Rios-Aguilar et al., 2011). In terms of outcomes for teachers, considerable FoK research has shown the effectiveness of a FoK framework in the educational environment, including: (1) improving teacher and student relationships; (2) increasing teacher professional development, and (3) creating educational innovation through applying FoK in pedagogical practices. This section

describes the themes demonstrating the important role of the FoK approach.

3.3.4.1. Creating mutual trust between teachers/school and students/parents

The FoK approach improves the relationships between teachers/school and students/their families through creating a “confianza” (mutual trust) (González et al., 2005) between teachers and students/families, transcending deficit thinking and prejudices toward disadvantaged students and their families (González, Wyman, & O’Connor, 2016; Rodriguez, 2013; Templeton, 2013; Hogg, 2013; Moll, 2014).

First, the empirical knowledge that surfaces when teachers attempt to understand their students’ behaviour and the special situations of their families, is the result of a mutual trust between teachers and students/families. In a study of the benefits arising from teachers’ collaboration with parents and Māori and Pasifika students into students’ FoK, Hogg (2013) concluded that as teachers and students grew to understand each other better, the relationship between them became closer.

In another example, a teacher discovered that a student fell asleep in class because he had to care for his younger sibling at night (Templeton, 2013). Instead of accommodating deficit thinking and prejudices, a FoK approach helped the teacher appreciate the student based on empirical knowledge embedded in the student’s everyday living conditions and exigencies.

González et al. (1995, p. 451) highlighted the impact on a teacher’s deeper understanding of and sympathy for students when involving a FoK approach:

I didn’t realize it at the time, but I used to believe that my students had limited opportunities in life. I thought that poverty was the root of many of their problems, and that this was something too big for me to change as a teacher.

In the same vein, a study by Sugarman (2010, p. 98), examined the perceptions of a teacher about a child in her second-grade class and how they both came to change after she gained an understanding of the FoK that he brought to school. Before a home visit, the teacher thought that:

My knowledge of Ricky [student] and his family ... was comprised almost exclusively of “lacks.” Ricky lacked sufficient reading skills ... discipline at home ... self-control and attentiveness; his mother lacked support.

However, by the end of the research, the teacher had grown in her awareness of the potential knowledge resources of the student and his family that caused her to become a “more ethical teacher” (Sugarman, 2010, p. 107).

Second, the relationship between teachers and students improves through collapsing the dominant power of teachers, where they present as experts and visit parents to inform of their students’ study outcomes. The FoK approach provides non-dominant groups opportunities to present their knowledge and practices as intellectual resources (Rodriguez, 2013) and afford students more opportunities to become “experts” (Barton & Tan, 2009, p. 69). In addition, to nurture a long-term relationship, mutual trust between teachers and students becomes the foundation for knowledge exchange between the two educational settings, such as family and school. When teachers respect the cultural heritages, resources and backgrounds of students, it leads to a lessening of many discontinuities at school that students, especially the disadvantaged and immigrants can experience (Saubich & Guitart, 2011).

In an investigation into relationships between teachers and students, Moll et al. (1992, p. 133) found that those investigated seemed “thin” and “single stranded” in most school environments, and what teachers knew about their students did not go beyond the classroom contexts. This is like teacher-student connections in ethnic disadvantaged school communities in the Việt Nam context, as discussed in Section 2.3. Most teachers focus mainly on student performance and seem to lack the requisite knowledge and skills to understand the psychology or useful skills, as well as knowledge, of children that can bring significant value to connections to learning, and help teachers understand their students’ needs (Tran Ngoc Tien, 2013). Language and culture barriers are always reasons challenging teachers’ communication with students in disadvantaged ethnic

communities, especially young teachers and those with different backgrounds. They seem confused in communication with their ethnic minority students due to language and cultural barriers (Truong Huyen Chi, 2011a, 2011b; Tran Ngoc Tien, 2013).

Moll et al. (1992, p. 133) suggested that to teach disadvantaged ethnic students effectively, teachers need deep insight into their students that passes beyond classroom boundaries, to know the child as a “whole person”, not merely as a “student”. Hence, the outcomes from this study expect to offer advantages for improving HMông minority students’ study through increasing relationships between Kinh teachers and ethnic minority students (HMông students) when the teachers attempt to explore and understand their students’ FoK.

3.3.4.2. Teacher professional development

Learning about and engagement with a FoK approach to students enables teachers to foster their professional development (Henderson & Zipin, 2010; Hill, 2010; Rios-Aguilar et al., 2011; Saubich & Guitart, 2011; Moll, 2014; Jovés et al., 2015).

In study group meetings (González et al., 2005), teachers are afforded many opportunities to take part in various activities as “learner” or “researcher”, such as coordinating with researchers to analyse data collected from visits to households, and discussing methodologies to design educational curriculum activities (Moll, 2014; Jovés et al., 2015). In other words, the FoK approach trains teachers to become “co-researchers”, in order to learn the FoK of their students and then utilise this knowledge to develop curricular activities in schools (Saubich & Guitart, 2011; Moll, 2014). Hill (2010) also stated that in study groups, coordination between teachers and researchers is intended to generate new knowledge through sharing multiple perspectives on “theoretical and practical knowledge” (p. 336) that might help enhance professional development.

In addition, by working with families, teachers have more opportunities to engage in “critical thinking...constructive dialogue” (p. 171) that help them avoid misperceptions and extend their understanding, stimulating possibilities for improving their pedagogical practices (Rios-Aguilar et al., 2011) and become active teachers (Riojas-Cortez & Bustos Flores, 2009).

For instance, in a project designing curricula and pedagogy for schools in a high-poverty community, Henderson & Zipin (2010) used students' stories around their life in the local community to create clay animation videos for learning and teaching purposes. Their findings showed that teachers' discussions and engagement with students' lived experiences aided recognition and a deeper understanding of particular issues and concerns of the students, such as violence in their real life.

3.3.4.3. Creating educational innovation for teachers' pedagogical practices

Much FoK research shows that learning about students' FoK and applying it in their classrooms helps teachers improve their pedagogical practices (Sugarman, 2010; Fraser-Abder et al., 2010).

Three key pedagogical dimensions of FoK have been summarised in Table 3.2 according to Rodriguez's (2013) study of pedagogical approaches, utilising FoK and reflected educational innovation for teachers' pedagogy practices while learning and implementing students' FoK.

First, teachers' acquisition of new pedagogical practices that make multiple curricular connections with children's FoK -- made available through their families and the wider community -- support teachers in the *co-construction of knowledge* (Rodriguez, 2013, p. 95) between students' out-of-school knowledge and academic knowledge in school, which lead to innovation in teaching practices and transformation of students' learning achievement (Rodriguez, 2013).

The second significant point in terms of educational innovation for teachers' pedagogy practices is that *multiple FoK* (Rodriguez, 2013, p. 95) among students, their families, and the community are recognised and valued equally in different subjects in the classroom (Barton & Tan, 2009; Rodriguez, 2013; Jovés et al., 2015). In addition, equality in the FoK approach through recognising and valuing *multiple FoK* breaks the traditional power between teachers and students, considers students as co-researchers in the classroom and resists cultural deficit thinking about students, especially ethnic minority and disadvantaged students.

The third theme is where the FoK pedagogical practices expand to become *micro- and macro-level consciousness and as conduit* (Rodriguez, 2013, p. 98) involving the reorientation of both

teachers and students. For example, Barton and Tan (2009) discussed the shifting discourses that could connect students' FoK with their science learning in a middle school science classroom. While conducting the research, these researchers seek the manifestation of "*hybrid spaces*" in which the discourses of students' FoK confront the discourses of school science. The authors showed that by providing the conditions for student to engage their FoK and multiple (home, family, popular culture, school) discourses, the science classroom can promote both academic achievement and classroom engagement of students.

3.4. FUNDS OF KNOWLEDGE AND ITS CONNECTION TO SOCIO-CULTURAL LEARNING THEORY

The philosophy of the FoK framework has been influenced by a range of key theorists and located within sociocultural learning theories. This section briefly discusses these theorists' ideas.

The research findings of Hogg (2012) showed diverse theoretical frameworks related to FoK scholars, including *socio-cultural learning theory*, *critical theory*, *hybridity theory*, *systems theory*, and *the difference theory of caring*.

The differing approaches to a FoK definition across a variety of educational areas are evidence of the diverse conceptual frameworks associated with it. Among key FoK theories, socio-cultural learning theories are considered the conceptual basis and the most popular. It is argued that sociocultural theories are associated with the main purposes of the current study. Thus, this section, will describe the connection between sociocultural ideas through the sociocultural point of view and the FoK framework.

3.4.1. Sociocultural learning theory

Based on sociocultural ideas related to human learning and children's development, Tarnopolsky (2012) argued that successes in human learning and development result from the social process of constructing knowledge and practices from experiential activities.

Rodriguez's (2013) view was that students' learning would be motivated through their

interactions and life experiences in social historical settings, including informal environments, such as the family, or formal areas in school with teachers and peers. As Duchesne and McMaugh (2018, p. 264) argued, learning arises not just from passive impersonal experience but from active interpersonal connection through social interaction, where learners are actively involved in “making meaning for themselves, supported by peers, teachers, parents and community members”.

In constructing knowledge, the idea that children’s knowledge and experience engaged in the social construction of their real lives with their families and communities is consistent with the FoK approach, which reinforces the need for “historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and wellbeing” (Moll et al., 1992, p. 134) or that “funds of knowledge is based on a simple premise that people are competent and have knowledge, and their life experiences have given them that knowledge” (González & Moll, 2002, p. 625). Thus, learners’ experiences and practices are considered the educational resource that helps students to making meaning of and contribute to new knowledge (Moll et al., 1992; González & Moll, 2002).

Rodriguez (2013) also showed the clear connection between FoK studies and sociocultural theories in the teaching and learning process. The perception is that “learning is a socially mediated set of processes that reflect the influence of social history and context within which learners (and teachers) carry out their activities” (Rodriguez, 2013, p. 91).

In the publication of Moll’s (2014) book, entitled *L. S. Vygotsky and education*, Moll draws on Vygotskian perspectives to show the potential educational practices relating to biliteracy development in children’s study and FoK approach through the cultural-history approach. For example, through the FoK approach, teachers with colleagues and researchers have opportunities to collaborate in the study-group settings, discuss theory and analyse data gathered from students’ households. This collaboration becomes a *mediating system* moving from Vygotsky’s theories to practices that enable them to manage households’ knowledge, adjust classroom teaching practices and transform teachers’ roles. Moll investigated that “the most important resources for educational development are found and bound in our children, families, and local communities” (Moll, 2014, p.155).

Thus, both FoK and sociocultural theories state that new understandings and practices can be constructed when people activate everyday understandings of practices and knowledge. Therefore, for this study, both everyday concepts and concepts about FoK in the literature could inform Kinh teachers' learning and implementing in their teaching practices.

In the current study, these two concepts regarding thinking about and evaluating teachers' practices will be considered and located. In the context of teachers' learning and applying HMông students' FoK, for example, a Kinh teacher might develop a deeper understanding of the valuable experiences and practices of the HMông child in his/her community, such as the language or cultural aspects being brought into classroom settings.

The use of this framework to research ethnic students' FoK promises to illuminate the diverse resources of dominant groups and offer a compelling argument for adopting a FoK approach to transform theory into practice. The goal is to promote culturally responsive pedagogical achievement.

3.4.2. Culturally responsive teaching and learning

In her research with African Americans, Gay (2018) featured the culturally responsive concept, which impresses that teaching and learning practices need to be based on the cultural knowledge and experiences of ethnically diverse students. She defined culturally responsive teaching as “using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them” (Gay, 2018, p. 36).

Gay (2018) believed that a teacher who employs a culturally responsive approach has the capacity to understand his/her students' cultural characteristics and learn “detailed factual information about the cultural particularities of specific ethnic groups” (Gay, 2002, p. 107). Gay suggested that there is a need to adjust and contextualise existing curricula to adapt to the needs of all students in the classroom and contribute to making connections between the students/parents and teachers/school.

Gay expected the building of bridges between the cultural knowledge and skills of students through “culturally relevant pedagogy” to be very important for engaging them intellectually and academically, and making their learning more effective. In addition, equal educational opportunity would be provided that values differences among ethnic groups, individuals and cultures to achieve the needs of society (Gay, 2013).

A culturally responsive teaching model for marginalised students and academic development was investigated by Hernandez et al. (2013). It consisted of multiple components, including: (1) content integration, (2) facilitating knowledge construction, (3) prejudice reduction, (4) social justice and (5) academic development (p. 815). These five components are considered as comprehensively defining culturally responsive training for teacher education and designing curricula and assessment directed at the inclusion of students’ cultural knowledge and daily experiences in teaching science and mathematics (Hernandez et al., 2013). Persuaded by the components of and emphases on “culturally responsive teaching” that focused on recognising and developing natural diversity and flexibility of competence among diverse students, Gay (2018) lent support to the FoK frameworks of both González et al. (2005) and Moll et al. (1992) due to their similarities.

However, research in this area recognizes that “culturally relevant pedagogy” presents challenges because the theory “ultimately clashes with the traditional ways in which education is carried out in our society, thus making [it] seem herculean to many teachers” (Morrison et al., 2008, p. 444). In addition, with limited classroom time available, teachers often experience work overload trying to cover the material, particularly new inservice teachers who found that, having barely familiarized themselves with the curriculum, incorporating this theory into their teaching practices proved difficult (Young, 2010). Therefore, although it is recognised that culturally relevant pedagogy is a “task that teachers must undertake if they wish to help fulfil our society’s ideals for equitable education for all” (Morrison et al., 2008, p. 445), it is suggested that future research should be mindful of these complexities.

This section has shown the clear connections and similarities between the FoK framework and Vygotsky's theories and the culturally responsive teaching theory in the teaching and learning process. In the next section, HMông intellectual knowledge in Việt Nam context is discussed.

3.5. HMÔNG INTELLECTUAL KNOWLEDGE

With a population of around 12 million people worldwide, the HMông people are considered a relatively large ethnic group, most of whom live in China while the remainder reside in Laos, Thailand, and Việt Nam, Burma, France, USA, Canada, Australia, French Guiana, Argentina, New Zealand and Germany. Luong Minh Phuong and Nieke (2013) reported that in Việt Nam, among its 53 ethnic minority groups, the HMông people are listed as the fifth largest, accounting for approximately 1.24% of the country's population, and divided into different groups, including: HMông Der (white HMông), HMông Du (black HMông), HMông Si (Red HMông); HMông Dua (Green HMông); HMông Lenh (flowery HMông) and HMông Xua (Cross- bred HMông).

According to UNFPA (2012, p. 57), the majority of HMông (over 91%) in Việt Nam are settled in the northern mountainous regions, including Yên Bái province where this research is located, accounting for 11.06 % of Yên Bái's population of 740.4 thousand. The HMông people have rich and specific knowledge from their homes and the lives they live. This section investigates the *funds of identity* (Saubich & Guitart, 2011) of the HMông, their cultural values, and the experiences that shaped and developed their lives and production in the Việt Nam context.

3.5.1. HMông identity

The diverse identities of the HMông are reflected in the language, customs and rituals among its six different groups (Luong Minh Phuong, 2015). Throughout its history, the HMông language was without script (Culas, 2010). Their cultural experiences and heritage have therefore been handed down to successive generation for centuries through oral teachings, storytelling, and legends (Luong Minh Phuong, 2015).

HMông folk lore in the form of myths, fairy tales, proverbs and folk tales, and poetry and music are often introduced to the young by HMông elders of the family or clan, or in village meetings

through ceremonies, religious rituals and worship, in the form of oral tradition (Luong Minh Phuong, 2015). This researcher also describes unique forms of HMông self-identity shown in their customs, rituals, and festivals, such as funeral and worship rituals (illness worship, forest worship) and wedding customs.

3.5.2. Cultural heritage

The HMông community is considered an ethnic minority group that is rich in cultural resources. Sources of HMông cultural knowledge and language are observable in “folk songs”, “worship rituals”, “sung poetry” and the “Qeej instrument” (Luong Minh Phuong & Nieke, 2013, p. 27; see also Luong Minh Phuong, 2015) and instilled in young HMông boys by parents, grandparents and community elders. Regarding the girls, housework, and complex embroidery are also considered important cultural aspects in HMông families (Luong Minh Phuong & Nieke, 2013). These two researchers noted awareness among the HMông of the important role and responsibility for preservation of their culture and language of. For example, in the research of Luong Minh Phuong and Nieke (2013, p.28), a HMông 14-year-old male student being interviewed stated that learning his traditions, customs, and rituals was very important to him:

My parents tell me that whatever high position in the society I may hold, and wherever I live, I have to follow our traditions and customs when coming back home. Being HMông, we must know HMông rituals. Being HMông, we are also responsible for preserving our culture...

Finally, Luong Minh Phuong and Nieke (2013, p. 27-28) pointed to three different educational networks through which the HMông’s cultural heritage is transmitted and enhanced, namely “family based teaching”, “clan based teaching”, and “village based teaching”. Cha (2010) had explained that behaviours and practices of the HMông are always influenced and directed by the social norms, rules and standards of their clan and community.

The embroidery experience is seen as one of the most important aspects of cultural knowledge influencing HMông livelihood choices. Luong Minh Phuong’s (2015) study of HMông cultural

competence in its relationship with the quality of their education describes embroidery skill as part of the HMông identity and cultural heritage. Luong Minh Phuong (2015, p. 164) described how HMông mothers teach their girls to embroidery:

When girls were around 10-12 years old, they would be taught by their mothers how to embroider. The mothers usually guided their daughters by using a piece of cloth, needles and a sample of flowers or shapes. Mothers gradually embroidered first, daughters imitated then. The decoration of a HMông dress was typically following a cultural trait that was transmitted from generation to generation...The patterns of HMông dress often had geometrical designs such as squares, rectangles, diamonds, spirals or crosses, etc. They usually linked to familiar objects in the HMông's life such as pumpkin flower, sunflower, "jâujsuôi" flower, chicken feet (toukay), etc.

Luong Minh Phuong (2015, p. 164) showed that HMông women possess valuable capabilities such as "a comprehensive and imaginary mind", "good memories" and "a good mind, patience and carefulness" in their geometrical designs of patterns such as squares, rectangles, diamonds, spirals or crosses. Turner (2007) noted that embroidery and textiles have become "the heart of the HMông trade" (p. 401) and a resource to support HMông rural livelihoods. Regarding musical knowledge, the HMông often make their own musical instruments from leaves and wood (Luong Minh Phuong, 2015). While HMông mothers teach HMông girls embroidery skills, HMông fathers teach the boys how to play the Qeej instrument (Luong Minh Phuong & Nieke, 2013; see also Luong Minh Phuong, 2015).

3.5.3. Experiences in labour and production

HMông parents, faced with the difficult living conditions of the disadvantaged, spend most of their time on farm work. When not in school, HMông children often help their families in the fields, helping with agricultural work such as grass cutting, buffalo herding and wood collecting. In addition, they undertake many household tasks like caring for siblings, cooking, peeling maize, and washing clothes (Luong Minh Phuong, 2015). Through their daily activities, HMông children

have the opportunity to develop and enrich their sense of responsibility and independence.

In the Sa Pa district of Việt Nam the livelihoods of HMông households are based mostly on their various patterns of trade activity in forest and agricultural products (e.g. cardamom, rice, and maize alcohol) (Turner & Michaud, 2008). These researchers do express however, that the feature characteristic of HMông economic production is the cultural aspect. As Turner (2012a, p. 549) explained, HMông trading “is based on human need rather than profit, with the concepts of well-being or happiness being.” Turner (2012a,) stated that although HMông farmers’ economic activity appears adaptive and resilient in the face of market and social integration practices in Việt Nam, it is reflected in terms of “semi subsistence” (p. 542) and their main wealth classification is the cultural focus.

In sum, HMông people have a rich history and culture, and possess a depth of intellectual knowledge in various aspects of their daily activities and production. The lingering question is why, in the educational space, do HMông students in mountainous and disadvantaged northern Việt Nam continue to face many significant barriers and disadvantages in their schooling and being considered underachieving students? (as discussed in Chapter 1 and Chapter 2).

The FoK theoretical framework of this thesis is structured to explore Kinh teachers working with children of HMông heritage. The sociocultural framework embeds the research in the concepts, and the specific focus on HMông knowledge pinpoints the focus directly on improving the educational experiences and performance of this group of learners.

3.6. EVALUATION OF FUNDS OF KNOWLEDGE LITERATURE

According to Hogg’s (2011) research, only a few reviews have originated outside the USA. Other than Australia, the United Kingdom and Canada, the bulk of FoK theorizing and research has been undertaken by Northern American scholars. In Việt Nam, the only research found was Hedges et al.’s (2016) study of primary teacher-ethnic minority parent partnership practices that foregrounded local FoK in a Bah’nar primary class. Moreover, most FoK research has focused on the experiences of Mexican-American students (and their families) in Arizona schools (Cooper, 2016).

Moll and Greenberg (1992) carried out research on Hispanic (predominantly Mexican) working-class families in Tucson, Arizona, based on a “household analysis” (p. 320) of how these families functioned and exchanged knowledge, where a diversity of household skills and practices was noted. However, Andrews and Yee (2006) pointed out that in the Moll and Greenberg study (1992), on the broad levels of language and class there was homogeneity amongst these families. Examination of FoK of HMông minority ethnic students and their community in Việt Nam, in which the current research was carried out, is expected to reflect a higher degree of diversity of ethnicity, language and cultural knowledge, and class amongst the minority ethnic children and families.

This research considers the importance of thoroughly understanding the FoK definition. It is supposed that a restricted FoK definition cannot provide comprehensive information within this context because diverse sources of FoK might manifest in different children, locations, communities and networks (Thomson & Hall, 2008), and any and all sources of FoK gained from life experience could contribute to students’ prior knowledge as they engage in the classroom context (Hogg, 2013). Hence, the current research explores an array of *multiple FoK* of HMông students and their families that could serve as educational resources for the *co-construction of knowledge* in teaching HMông students and contribute to the FoK theoretical framework.

Recent research examining interactions between teachers/schools and families/students, questions whether or not Kinh primary teachers acknowledge or might to take *dark FoK* (Zipin, 2009) of HMông students and their parents into account as a source FoK, especially in disadvantaged living and studying environments where life is vulnerable to natural disasters, cultural norms, gender equality, and poverty (UNICEF et al., 2008; UNICEF, 2010). Furthermore, it is questioned whether these primary teachers are able to investigate any transfers from *dark FoK* of their students and communities into academic knowledge in school or whether teachers and their students are still not managing the issue of ‘dark’ areas.

To be meaningful, an understanding and exploration of communities’ FoK needs to be grounded in detailed research, in which minority ethnic children and their families are equal participants compared with the dominant group (Andrews & Yee, 2006). The question here is can Kinh primary teachers who represent the majority group overcome social stereotypes and their own

deficit thinking toward HMông children and their community to recognise and value their students' FoK community and use them in the teaching/learning practices?

Second, Hedges et al. (2016, p. 50) argued that what constitutes “education,” nationally and internationally is highly contestable. In effect, the foregoing literature indicates that FoK is a contested and contestable concept (e.g. Zipin, 2009; Hedges, 2011; Saubich and Guitart, 2011). There are at least two ways for researchers to respond to this situation. First, it is possible to select a particular definition of FoK, justify the grounds for doing so and then collect and analyse evidence according to that definition. There is a second option, which is taken up in this study. Specifically, this research views FoK as a contested and contestable concept, and uses this latitude to be alert to the breadth of evidence that is collected from the teacher participants in this study, and analyse this evidence to identify the range of positions they take on this concept. It will be argued that recognition of parents/communities/students' FoK allows teachers to demonstrate the value they assign to different areas in diverse settings. To this end, to fulfil the aims of the research all repositories of FoK will be utilised, including parents, individuals in communities, and ethnic students.

Third, the content of the FoK approach ranges across all levels of schooling, in particular elementary education, which is the most popular, and followed by middle school and high school (Hogg, 2011; Hogg, 2013; Llopart & Esteban-Guitart, 2018). These different levels of schooling cause one to ponder the transferability of the FoK approach and to determine which of its elements will effectively support the area (primary schools) of this research.

Fourth, in terms of FoK methodology, home visits are considered a significant method, however this can be arduous for many teachers because it is not their customary role (González, Wyman, & O'Connor, 2016). This study will examine whether Kinh teachers, who have different language and cultural intellectual knowledge from HMông students, use visits to HMông students' houses to explore their knowledge and experiences for teaching purposes. In addition, are there any other methods Kinh teachers use to explore their HMông students' FoK in the disadvantaged mountainous environment of HMông minority students and their community? Interviews with Kinh teachers might provide a research model with detailed discussion of the theoretical basis and

methodology from home visits to applications in teaching practices. This process, which is a feature of this research, is expected to realize value outcomes.

Finally, the literature reviewed in this section focuses on the pedagogical applications of FoK and their classification. Teachers are expected to acquire the necessary pedagogical knowledge to make multiple curricular connections with children's FoK, made available through their family and wider community, in order to realise the co-construction of knowledge so as to transform their learning achievement (Rodriguez, 2013). The focus of this study is on what it calls teachers' "funds of pedagogical knowledge" that explore Kinh teachers' practices of HMông students' FoK. Thus focussed, this study will generate evidence to provide an informed perspective on the relevance of and resistance to FoK between the HMông and Kinh in the sociocultural and historical contexts of education in Việt Nam.

In this period of globalisation, teachers are more important than ever, as they help learners to develop skills for success. FoK theoretical framework is a call for the development of teachers' pedagogical content knowledge so they can design learning experiences that are relevant to the ways skills are used within and beyond the classroom, and that align with and draw on their existing knowledge and practices in the homes and communities of all learners. The focus on pedagogical transformations and the need for strong relationships between teacher and student further strength the articulation of the FoK theoretical framework for this study.

3.7. CONCLUSION

Following the literature review method on FoK (Section 3.2), this Chapter has pointed out key concepts of the FoK approach for investigating and testing a FoK conceptual framework for use in initial teacher education of ethnic minority students in Việt Nam. First, the origin of the FoK approach provides evidence and advantages that are considered a potential resource for disadvantaged and ethnic minority education (Section 3.3). Second, in Section 3.4 "The theoretical framework for pedagogical funds of knowledge", significant FoK concepts and important points in current FoK research were pointed out for the purposes of this study and use in the data analysis chapters. Next, Section 3.5 has shown clear connections and similarities

between the FoK framework and Vygotsky's theories and culturally responsive teaching theory in the teaching and learning process. This section followed with a discussion of the diverse intellectual knowledge of HMông in the Việt Nam context that would become educational resources for teaching HMông students. Finally, recent, relevant research on the FoK approach remains questionable regarding its relevance and application to Kinh teachers' exploring and implementing HMông minority students' FoK in school settings. Thus, the evaluation of this literature warrants investigating the focus for this study in the last section, Section 3.7.

From investigation of the field of FoK, it is necessary to justify and further develop the research methodology and methods suitable for the current study and research question that is clarified in Chapter 4.

CHAPTER 4. CASE STUDY RESEARCH METHODOLOGY AND METHODS

The purpose of this chapter is to explain and justify how the research methodology and methods used are suitable for the subject matter under investigation, specifically the research questions identified in Chapter 1, and in doing so make original contribution to knowledge. The purpose of a methodology is to target the building of a philosophical framework, strategy or plan to investigate evidence for research questions through choosing the best methods or procedures driving valuable data for the project (Creswell, 2014).

Chapter 4 describes and explains how and why the particular methodology and research methods are employed to design, develop and interpret the current research. There are five main sections in this chapter. First, the rationale for the appropriate educational research of the issues is identified (Section 4.1). Second, the reasons for choosing the case study methodology to investigate the research problems are explained (Section 4.2). Third, the research aims and questions are discussed (Section 4.3). Fourth, the data collection process is described including techniques, instruments, time, institutions, and participants (Section 4.4). Finally, data analysis discusses the technical methods and steps taken to process the collected data for the research design (Section 4.5).

4.1. RATIONALE FOR CASE STUDY RESEARCH

In most studies of FoK, the typical approach is to use educational interventions. In addition, the prototypical contexts are implemented at the school, students' households (though home visits) and settings in which the study meeting groups are established (Chao & Mantero, 2014; Llopart & Esteban-Guitart, 2017; Llopart & Esteban-Guitart, 2018).

In this study, there is a tension between education policy practices and the research literature (Chapters 1, 2, 3) such that HMông learners are poorly served by current pedagogies and where teachers lack understanding of the FoK of HMông learners. This tension is exacerbated by school systems that see low rates of HMông academic achievement and retention in schools. Thus, the

decision was made that this study would not be designed as an intervention. Instead, the purpose of this study was to better understand how Kinh teachers in two ethnic minority schools develop their understandings of, and use HMông students' FoK in their daily work. The purpose in doing so is to better understand the need and possibilities for change, especially through teacher education. As will be shown, teachers in these schools do take opportunities to competently demonstrate the FoK approach through different educational policies and programs (see 7.3.2). The teachers working in these schools who participated in this study have opportunities to take part in programs and projects that focus on understanding ethnic minority students and recognising their intellectual values (also see Table 4.3).

In this study, case study research methodology and methods were adopted. This is the reason why educational research and case study become crucial in collecting reliable evidence in educational science.

Educational research on the other hand provides a description of the phenomena and does not emphasise the use of statistical procedures to verify the conclusions (Kumar, 2014). According to Kumar (2014), one major advantage of qualitative methods is that the researcher is able to cover multiple aspects of a particular subject using information from fewer respondents or a smaller sample size than in quantitative research. Moreover, qualitative studies provide “illumination and understanding of complex psychosocial issues and are most useful for answering humanistic ‘why?’ and ‘how?’ questions” (Marshall, 1996, p. 522).

These qualitative techniques also allow research issues regarding social roles, images, identities, and other cultural components to be explored in their natural settings and contexts (Kalof, Dan, & Dietz, 2008). Creswell (2012) stated that qualitative research is commonly employed to investigate and understand the experiences and perspectives of people and is “interested in meaning – how people make sense of their lives, experiences, and their structures of the world”. This approach was found suitable because the current study explores Kinh primary teachers' curriculum uses of HMông students' FoK in the sensitive and complex research context of primary ethnic minority education in Việt Nam. It could fill a gap in the literature in relation to the FoK approach to ethnic minority students within the Vietnamese educational context.

In his study about the hardest science of educational research Berliner (2002, p. 18) noted, “we do our science under conditions that physical scientists find intolerable”. Berliner’s (2002) investigation of variables in education such as schools, classrooms, teachers, students or parents are embedded in complex and various kinds of community support. Thus, these qualitative techniques allow subjects to be explored in their natural settings and contexts, facilitating exploration of their social roles, images, identities and other cultural components (Kalof et al., 2008). Local conditions will require differences in programs, teaching methods, management and various kinds of community support (Berliner, 2002).

Moreover, educational research is associated with one’s desire to discover, investigate, and learn more about lesser-known issues surrounding a phenomenon or topic. Creswell (2014) also argued that qualitative research bears close relevance to problems that are not fully formed or understood due to insufficiency of theory and previous research. Thus, it is useful to apply this method to research FoK -- a new land with many contestations arising from FoK review.

Qualitative research uses methods such as in-depth interviews, face-to-face interviews and participant observation over long periods of time in the field (Denzin, 2011). Qualitative data is collected from “texts, as well as images, movies, audio-recordings, cultural artefacts, and more” rather than “numerical data or numbers”, as in quantitative inquiry (Kuckartz, 2014, p. 2). The interpretive feature of the qualitative approach has allowed the researcher in this study to gain a deeper insight into Kinh teachers’ perspectives and methods in bringing HMông students’ FoK into teaching practices in ethnic minority schools in Việt Nam.

Flick (2014, p. 12) argued that in increasingly multicultural communities today with a “new diversity of milieus, subcultures, lifestyles, and ways of living”, educational projects become an effective tool for identifying such intangible factors. Thus, this feature will become a relevant and valuable approach for exploring FoK of HMông minority students in primary school settings in Việt Nam.

Based on the above characteristics of qualitative research, this study employed qualitative method as a primary methodological focus, designed within the constructivist paradigm.

4.2. CASE STUDY RESEARCH METHOD

Yin (2014, p. 4) emphasised that case study is one of five qualitative approaches that is very important to explain, explore and describe “complex social phenomenon” in real-life contexts through a “case”, such as an individual, group or event. It is important to each case study researcher to clearly understand the components to conduct such studies rigorously.

According to Yin (2014, pp. 27-35), designing a case study consists of the following components: (1) the study’s questions; (2) its propositions (if any); (3) its unit(s) of analysis; (4) the logic linking the data to the propositions, and (5) the criteria for interpreting the findings.

Yin (2014) emphasised drawing on the first three elements of the case study: (1) the study's questions, (2) propositions, and (3) unit(s) of analysis that lead to identifying what data is to be collected. Specially, the questions guide all parts of the study and establish the boundaries of the entire process. Specially, a research design should be investigated. The design also needs to highlight what should be done after the data collection stage through logically linking the data to the proposition and the criteria for interpreting the findings. To sum up, the research design is functional in building a logical and specific structure as well as providing a specific direction that knits an entire study together. This researcher followed Yin’s (2014) the case study and units of analysis, shown in Table 4.1.

Table 4.1: Key components of this case study (adapted from Yin, 2014)

Components	Definition (yin, 2014)	Application in this study
Main research questions	the form of the question-in terms of “who,” “what,” “where,” “how,” and “why”- provides an important clue regarding the most relevant research method to be used.	whether and in what ways Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students?

Subsidiary research questions	the form of these question in terms of “who,” “what,” “where,” “how,” and “why”- provides an important clue regarding the most relevant research method to be used.	<p>What sources of HMông students’ FoK, if any, do Kinh teachers identify in their practices across primary school curricula?</p> <p>How do Kinh primary teachers use HMông students’ FoK as part of their teaching/learning practices?</p> <p>What are the educational difficulties and possibilities for Kinh teachers using HMông students’ FoK in primary school?</p>
Study propositions	each proposition directs attention to something that should be examined within the scope of study.	<p>Kinh primary teachers’ curriculum uses of FoK;</p> <p>Sources of HMông students’ FoK;</p> <p>Teachers use HMông students’ FoK;</p> <p>Educational difficulties and possibilities of using FoK.</p>
Unit of analysis of the “case”	focus on a small group (n=26) of Kinh primary school teachers working with HMông students as the case.	<p>HMông students’ sources of FoK that are uncovered by Kinh primary teachers;</p> <p>Kinh primary teachers’ pedagogical practices to implement HMông students’ FoK;</p> <p>Educational difficulties and possibilities to support Kinh primary teachers’ learning and implementing HMông students’ FoK.</p>

In the current project, recent literature relating to issues surrounding the teaching of ethnic minority primary students in Việt Nam and the FoK framework outlined in Chapter 3 assisted in refining the research questions. The literature that related to research methodology and research methods increased the author’s understanding of the processes for collecting and analysing data for this study.

In an attempt to achieve the objectives of this study, a case study was designed to determine Kinh primary teachers’ curriculum uses of HMông students’ FoK. There are significant reasons why the case study design was used for the purposes of this study.

First, a broader perspective was adopted by Yin (2014, p. 16) who maintained that case study is preferred by researchers who “want to understand a real-life phenomenon in depth”, through studying a particular instance “especially when the boundaries between phenomenon and context

are not clearly evident”. In this case, it will allow this researcher to have a deep insight into the process in which Kinh teachers incorporate ethnic HMông students’ FoK into classrooms, and factors that support and/or constrain their application.

Second, Yin’s (2014) study suggested that the case study’s questions of “how” and “why” are posed when “such questions deal with operational links needing to be traced over time, rather than mere frequencies or incidences” (p. 9). Thus, case study offers an effective method to evaluate how Kinh primary teachers engage with ethnic minority students’ and communities’ knowledge for educational purposes.

When conducting research with human subjects, Yin (2014) also showed the importance of understanding and following standards for ethics to ensure quality of design and create comprehensive and directive pilot studies. Because it is research involving human subjects, data collected in this study must ensure the upholding of ethical standards and quality.

4.3. RESEARCH AIMS AND QUESTIONS

This section begins with discussion of the research aims of the current study and follows with the research questions.

4.3.1. Aims of the research

This study explores Kinh primary teachers’ curriculum uses of HMông students’ FoK in the primary school context in Việt Nam. The purposes of the study are to:

1. explore the sources of HMông students’ FoK explored by Kinh primary teachers as part of the teaching curriculum;
2. identify the pedagogical practices Kinh teachers employ to use HMông students’ FoK;
3. identify any potentials and barriers that may facilitate or impede the incorporation of HMông students’ FoK into teaching in the classroom.

4.3.2. Research questions

As Yin (2014) noted, all research is driven by the research questions that then lead to the choosing of certain relevant sources of data and the feasibility of accessing those sources and finally, methods for collecting and analysing the data.

The central research question is: whether and in what ways do Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students?

Table 4.2 shows the sub-research questions of this study and data sources, data collection and data analysis of each sub-research question.

Table 4.2: Sub-research questions and data sources, data collection, and data analysis

SUB-RESEARCH QUESTIONS	DATA SOURCES	DATA COLLECTION	DATA ANALYSIS
What sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula?	Funds of Knowledge of HMông students, their family and community explored by Kinh teachers	- In-depth-interviews of Kinh teachers, school principals - Documents (Teacher documents, teacher lesson plans, policy documents)	- Open coding - Categorisation - Thematic analysis - Evidentiary conceptual analysis
How do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices?	- Kinh teachers' methodology to explore HMông students' FoK - Pedagogical practices Kinh teachers use to implement HMông students' FoK in teaching curricula	- Interviewing Kinh teachers, school principals - Documents (Teacher documents, teacher lesson plans, policy documents)	- Open coding - Categorisation - Thematic analysis - Evidentiary conceptual analysis
What are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school?	Educational difficulties and possibilities to support Kinh primary teachers' learning and implementing HMông students' FoK.	- Interviewing Kinh teachers, school principals, the local educational manager - Documents (Teacher documents, teacher lesson plans, policy documents)	- Open coding - Categorisation - Thematic analysis - Evidentiary conceptual analysis

4.4. DATA COLLECTION

Section 4.2 names the main components of this case study. For data collection, these case study characteristics raise an important issue for which appropriately designed field procedures are very important. In this section, the ethical matters that relate to participants in the current research and the researcher's responsibilities are firstly considered and then followed by an explanation for the selection of setting and participants to address the research questions.

4.4.1. Ethical Considerations

Data collection was conducted from October to December 2017 in Văn Chấn district, with ethics approval number H12317 from Western Sydney University's Human Research Ethics Committee in Sydney, Australia. In-depth interviews were used to collect data from participants. In the data collection process, ethical issues such as informed consent, anonymity and confidentiality were addressed. However, the researcher contacted various stakeholder groups including school principals, Kinh primary teachers and the local educational manager to invite them to take part in the study.

School principals

1. After receiving the authority from the Yên Bái Department of Education and Training to conduct this project, the researcher contacted (through email) two school principals at Trâu Piôr semi-boardings primary school and Khiz Zangx semi-boardings primary school. The researcher has used HMông pseudonyms for the school names.

2. The researcher explained to them the aim of the research, which is to explore Kinh primary teachers' curriculum uses of HMông students' FoK in classroom teaching and learning. As the school principals are the gatekeepers, the researcher also requested their permission (through email) to (1) provide information briefs on the prospective teachers through the school administrative staff, and (2) contact their teachers in their schools regarding participation. When the school principals expressed interest in participating, the information sheet

(Appendix 1), the invitation letter (Appendix 2), and the consent form (Appendix 3) were sent to them.

3. Further follow-up emails were sent to them to discuss interview times and locations.

4. The signed consent form was collected on the day the data was to be collected.

Primary teachers

The primary school Kinh teachers are from Việt Nam's majority ethnic group and speakers of the national language (Tiếng Việt). Here it is worth noting that, the Kinh have a parallel position of status and power in Việt Nam equivalent to that of the Anglo-Saxons in Australia. The position of Tiếng Việt in terms of power and knowledge similarly compares with English in Australia. These teachers were recruited as follows:

1. With school principal's permission, the researcher contacted the school administrative staff (through email) and requested they provide an information brief of certain teachers in the school, including following criteria:

- Name
- Gender
- Ethnicity
- Responsibility (what subjects and what grades?)
- Contact details (email address and/or phone number)

2. After receiving the requested teacher information from school administrative staff, the researcher personally selected Kinh primary school teachers who worked with ethnic H'Mông students (Grade 1-5) in their school.

3. An email was sent to each prospective teacher participant to explain the research project, the nature of their possible involvement if they elected to participate and a request for their

voluntary participation in this study. This entailed sending the information sheet (Appendix 1) and the invitation letter (Appendix 2).

4. For those who agreed to participate, a further email was sent to arrange suitable times and locations for interviews. A teacher consent form (Appendix 3) was sent to each.

5. The signed consent form was collected on the day of the interview.

A local educational manager from the Yên Bái Department of Education and Training

1. With the permission of the Yên Bái Department of Education and Training, the researcher contacted (through email) the local educational manager in charge of primary schools in the Văn Chấn region, requesting participation in the research.

2. Along with the agreement, the information sheet (Appendix 1), the invitation letter (Appendix 2), and the consent form (Appendix 3) were sent to her.

3. The signed consent form was collected on the day the data was to be collected.

Regarding the interviewees' confidentiality, as shown in Table 4.3, all interviewees' names have been encoded using pseudonyms in Tiếng Việt. Interviews of all candidates were conducted face-to-face. One-on-one interviews (45 to 60 minutes) were conducted for use in this study. Candidate participation in this research was entirely voluntary. Anyone could withdraw from this project at any stage without any penalty or influence on the participants. If they did choose to withdraw, their data would be withdrawn at that stage.

Participants were given the opportunity to review or edit their responses or contributions prior to data analysis. Copies of transcripts were delivered to participants through email if requested. After formal consent was obtained from study participants, interview data was recorded either in the form of expanded notes or audio recordings, to capture the precise wording used. All interviewees were reassured of anonymity and confidentiality.

It might be perceived that the researcher has an independent relationship with some prospective participants. The researcher ensures that the researcher's relationship does not impair the participants' free and voluntary consent and participation in this research. Research information sheets were formulated and sent to prospective participants and only those who replied and agreed to participate were recruited and selected for interview participation. All participants were informed in advance that they could withdraw from this research without penalty or consequences if they had concerns or felt uncomfortable about participating.

The above measures were taken to ensure that decisions about participation in this research were not subject to undue influence, coercion or exploitation between participants and researcher, and expressed in conditions in the consent forms sent to participants before interviews.

Local cultural values and customs in Việt Nam are such that researchers are expected to provide non-monetary gifts in recognition of participants' time taken away from paid or unpaid work, as well as acknowledgement of their contribution to the research. Gifts or tokens were provided to participants at the end of the data collection process. However, no money or gifts were used in this study to induce people to participate.

4.4.2. Setting selection

The focus of this research is upon Kinh primary school teachers in Văn Chấn, Yên Bái province, Việt Nam, who have had teaching experiences in classes of H'Mông ethnic minority students. This section explains how the district, schools, and teachers were selected.

Overview of case study sites

The study was conducted in Văn Chấn district, Yên Bái province in the northern highlands of Việt Nam. Yên Bái province was selected because, according to a UNFPA (2012) population and household census in 2009, Yên Bái is among the top five provinces with the largest population of

HMông people in Việt Nam (almost 11% equally 81.921 people). In addition, this province is among the 10 poorest provinces in Việt Nam with the high poverty rate at 45.33% (World Bank, 2011).

At the beginning, the researcher worked with the Yên Bái Department of Education and Training and officers at the Bureau of Education and Training (BOET) at the district level in Văn Chấn district to identify the primary schools best meeting the proposed criteria of the study. Regarding purposive sampling, Patton (2014, p. 53) states that “the logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research”. Thus, when determining study sites for the current research, this researcher identified the Văn Chấn region, the location of Trâu Piôr semi-boarding primary school and Khiz Zangx semi-boarding primary school. The decision was made to purposively sample two schools with high populations of HMông students.

Khiz Zangx semi-boarding primary school has a total of 17 classes, of which 15 are in the main school and two classes in its two satellite schools. There are 475 minority students in this school, accounting for about 99% of its primary students in the 2017 school year. There are only 14 local teachers in this school, accounting for about 32% of its primary teachers in the 2017 school year. The rest are Kinh primary teachers.

Similarly, Trâu Piôr semi-boarding primary school has 10 classes with 230 primary students in the 2017 school year, with ethnic minority students accounting for more than 99% of its total number. The school has 18 primary teachers, while Kinh primary teachers account for over 55%.

4.4.3. Participant selection

The current research examines and interprets the culture of a particular group. It employs ethnographic study for “describing, analysing, and interpreting a culture-sharing group’s shared patterns of behaviour, beliefs, and language” (Creswell, 2012, p. 462).

Therefore, there is a need to explore how Kinh primary teachers share their experiences, practices and beliefs in learning about and implementing their HMông students' FoK. Additionally, it is necessary to listen to the views of members from other groups. Thus, the participants in this research include Kinh primary teachers, school principals, and a local educational manager.

The reason these people match the profile for this research is that the research questions of this project focus on knowledge about Kinh primary teachers' curriculum uses of HMông students' FoK in teaching school curricula, and they have knowledge relevant to the answering of the research questions. The research accessed the following groups of participants:

1. Twenty-six Kinh primary teachers in two primary schools in Văn Chấn district in Yên Bái province.
2. Two school principals in two primary schools in Văn Chấn district in Yên Bái province.
3. One educational manager officer in charge of primary education of Văn Chấn district (BOET officer).

Kinh primary teachers were the main group interviewed because they represent the core focus of the research. It is they who decide how to learn and use HMông students' FoK in teaching the school curriculum. It bears reminding that these Kinh primary school teachers are from Việt Nam's majority ethnic group and speakers of the national language (Tiếng Việt).

The criteria used for purposive sampling of the primary school teachers (n=26, with n=13 from each school), is that they are primary school teachers who are Kinh and work with ethnic HMông students in their school. The Kinh teachers selected as participants have similar characteristics. First, they have the same background education level – a college degree. Second, their age group is 40-50 years old, with more than 10 years teaching HMông children. In addition, most Kinh primary teachers in the two schools are female. All primary teachers in the Khiz Zangx semi-boarding primary and Trâu Piôr semi-boarding primary school, at the data collection time in 2017, took part in the SEQAP and Save the Children project. With these projects' support, these teachers had opportunities to engage in different activities to develop fundamental

literacy and maths skills, as well as provide quality education among HMông minority children. A brief summary of the Kinh teacher participants and settings is presented in Table 4.3.

As well, school principals and the local educational manager contribute significantly to the educational environment, where they work and influence teaching practices in explicit and implicit ways. They understand the general information at the school level and local level, particularly the potentials of using HMông students' FoK in the teaching curriculum and textbooks in teaching HMông students.

In addition, the school principals and local educational manager are responsible for managing, organising, assisting and evaluating the implementation of educational policies at these two schools and at the local level. Especially, they understand the existing supports and educational policies for teachers in order to integrate HMông students' FoK in the teaching practices.

Moreover, the school principals and local educational manager contribute to the design of some documents and to in-service training that supports primary teachers' incorporation of students' out-of-school knowledge, cultural practices and other experiences in their daily life into the classroom environment. Therefore, the information gained from interviewing them regarding their opinions about teaching based on a FoK approach, and the ways in which they implement in-service training and professional development programs, will be useful for this thesis. Moreover, they are also seen as gatekeepers who will support this research by connecting the researcher in this study to teachers from the four schools participating in the study.

Table 4.3: A brief description of the participants and their school settings

Name of teachers (pseudonym)	Name of Institution	Time of experiment	Job Description	Gender	Age _{SEP} (By the Time of Experiment)	Year of Teaching	Qualification	Teachers are undertaken projects in the last 5 years
Teacher Lan	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	41	18	College	SEQAP Save the Children
Teacher Tam	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	43	15	College	SEQAP Save the Children
Teacher Chinh	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	39	15	College	SEQAP Save the Children
Teacher Lai	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	46	17	College	SEQAP Save the Children
Teacher Luong	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	39	20	College	SEQAP Save the Children
Teacher Hoa	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	45	22	College	SEQAP Save the Children
Teacher Nha	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	41	11	College	SEQAP Save the Children
Teacher Phu	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Male	47	25	College	SEQAP Save the Children

Teacher Huyen	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	50	29	College	SEQAP Save the Children
Teacher Phuong	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	43	15	College	SEQAP Save the Children
Teacher Dao	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	43	25	College	SEQAP Save the Children
Teacher Hien	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	46	25	College	SEQAP Save the Children
Teacher Loan	Khiz Zangx primary school	Oct.- Dec.2017	Teacher	Female	47	19	College	SEQAP Save the Children
Teacher Huong	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	40	20	College	SEQAP Save the Children
Teacher Nhan	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	40	21	College	SEQAP Save the Children
Teacher Thai	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Male	53	30	College	SEQAP Save the Children
Teacher Nhen	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	41	17	College	SEQAP Save the Children
Teacher Nhung	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	40	15	College	SEQAP Save the Children
Teacher Ly	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	43	19	College	SEQAP Save the Children
Teacher Anh	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	46	21	College	SEQAP Save the Children
Teacher Phong	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	47	23	College	SEQAP Save the Children

Teacher Vinh	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	41	21	College	SEQAP Save the Children
Teacher Yen	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	50	29	College	SEQAP Save the Children
Teacher Phong	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Male	39	17	College	SEQAP Save the Children
Teacher Oanh	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Female	39	15	College	SEQAP Save the Children
Teacher Tuyen	Trâu Piôr primary school	Oct.- Dec.2017	Teacher	Male	40	16	College	SEQAP Save the Children
School principal Thanh	Khiz Zangx primary school	Oct.- Dec.2017	School principal	Male	45	N/A	Bachelor	N/A
School principal Truong	Trâu Piôr primary school	Oct.- Dec.2017	School principal	Male	41	N/A	Bachelor	N/A
Local manager Hang	Văn Chấn Bureau of Education and Training	Oct.- Dec.2017	Educational manager	Female	42	N/A	Bachelor	N/A

4.4.4. Development of data collection tools

The researcher developed a qualitative case study research design that documents Kinh primary teachers' curriculum uses of HMông students' FoK.

In-depth interviews and documentation were the main tools used to address the above research questions. This researcher conducted in-depth interviews, a qualitative method for individual interviews with a small group of participants. Interviewing is considered one of the most common tools that provides more detailed information than other data collection methods and enables the researcher to investigate new issues in depth in educational research (Fryer et al., 2012). In addition, using documentation ensures that the information the researcher collects will provide a reliable basis for answering the various questions they are asking and for supporting and justifying the answers they provide.

4.4.4.1. In-depth interviews

The researcher will use in-depth interviews, an essential source of case study evidence. This method facilitates a deeper and more thorough understanding of the participants' meanings and interpretations of their teaching experiences (Punch & Oancea, 2014). This could involve their self-identification, awareness, and responsibilities as teachers employing the FoK approach and, by extension, could ultimately illuminate their perceptions. As Seidman (2013, p. 9) stated “the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience”.

Table 4.4: In-depth interviews in qualitative data collection in the case study

Participants	Participants	Detailed data of the targeted participants
Kinh primary teachers	26	In-depth interviews with the selected Kinh primary teachers
School principal	2	Interviewees (Kinh group) in charge of ethnic primary education in two school sites (Trâu Piôr semi-boarding primary school and Khiz Zangx semi-boarding primary school).
Local educational manager	1	Interviewee (Kinh group) in charge of primary education of Văn Chấn district.

Yin (2014) argued that one of the most important sources of case study information is the interview. Well-informed interviews can provide significant insights into the affairs or actions of interviewees. Because they yield critical data pertinent to behavioural affairs, interviews are considered effective tools for accessing participants' opinions, attitudes, beliefs, and/or how they construct reality (Palaologou & Needham, 2016).

Kinh primary teacher interviews

The researcher conducted 26 face-to-face teacher interviews. One of the benefits of the face-to-face method is that the researcher can follow the flow of the narrative and direct the next question. The researcher also captures emotions and behaviours, and verbal and non-verbal forms of communication, including the interviewee's body language (DeFranzo, 2014).

The goal of this study is to explore Kinh primary teachers' curriculum uses of HMông students' FoK. As part of the work, 26 Kinh teachers participated in in-depth interviews on qualitative methods of study. These interviews describe their experiences conducting home visits and the HMông's FoK. Finally, how Kinh teachers make use of HMông students' FoK in their teaching practices is explained. During data collection the researcher lived in the boarding schools with the teachers. Therefore, personal stories of these teachers and their students were noted and adopted. The specific questions for each of the targeted groups are attached as Appendix 4.

When contacting the participants, the researcher clearly explained the aim of the research and sent each the information sheet (Appendix 1) and the invitation letter (Appendix 2). After receiving the agreement of the interviewees, the consent form (Appendix 3) was sent to each with a request to sign and return it directly. Finally, 26 interviews were conducted face to face. An audio recorder was used and then transcribed by the researcher.

Most of the Kinh teachers were enthusiastic to participate in the interviews. A few seemed to be nervous before their interviews, so to minimise any anxiety they might have felt, the aims of the research and their contributions to the outcomes of the study were clearly explained. While some were interviewed in the hall of the school, others made appointments to meet in

their school hostel. The teachers' hostel is located in the school and each teacher stays there once or twice per week to look after the ethnic students who live at the school.

In an attempt to reduce any anxiety that may be triggered by the perceived formality of the interview process, and prevent distractions caused by the presence of others, interviewees were asked to choose the venue most comfortable for them. During interviews, deep and reflective engagement by the Kinh teachers was encouraged, while their behaviours and body language were focussed upon. One memorable example is of a Kinh teacher who had taught HMông students for 20 years in Khiz Zangx semi-boarding primary school. She became highly emotional and cried during her interview when recounting the difficulties and experiences faced during her teaching journey in the ethnic minority area.

School principals

The second group interviewed was school principals, two of whom were invited to participate (n=1 from each school). One worked at Trâu Piôr semi-boarding primary school and the other at Khiz Zangx semi-boarding primary school.

After receiving authority from the Yên Bái Department of Education and Training to conduct this project, the researcher contacted (through email) these two school principals. The aim of the research was explained to them, that is, an exploration of their Kinh primary teachers' incorporation of ethnic minority students' FoK into classroom teaching and learning. The aim of the research was explained in the information sheet for participants (Appendix 1). As they expressed an interest to participate, an invitation letter (Appendix 2) and consent form (Appendix 3) was sent to each. A further follow-up email was sent to discuss interview times and locations. The signed consent forms were collected on the day the data was collected.

Educational manager at Bureau of Education and Training (BOET)

The third interview stage involved the educational manager who was in charge primary schools at BOET. Upon her agreement to participate, she was sent an information sheet (Appendix 1), invitation letter (Appendix 2), and consent form (Appendix 3). The signed

consent form was collected on the day the data was collected. The specific questions for the in-depth interviews of each targeted group (teachers, school principals, and a local educational manager) are attached in Appendix 4.

4.4.4.2. Educational documents

The purpose of this method is to locate valued data sources from ethnic educational programs and minority education policy, and from the teachers themselves in their teaching that could relate to the FoK approach. This method will be employed as a basis for formulating the literature review chapter (Chapter 2) and the discussion and conclusion chapter (Chapter 8).

In educational research, historical and contemporary documents are recognised as rich and valuable data sources that are stable, specific, broad, and unobtrusive (Yin, 2014). He stated that documents can provide evidence to corroborate or contradict information gleaned from other resources. If the documentary evidence is conflicting, the researcher will be responsible for further enquiry into the topic.

Program reports, educational policies, and guidelines

The first type of documentary analysis employed included (1) all project documents and reports involving ethnic minority education; (2) national primary curriculum materials that make it possible to investigate the quality of lessons and topics associated with ethnic minority students' FoK, particularly HMông students, in this case; and (3) other educational policies and guidelines on primary curriculum and instruction involving ethnic minority education, nationwide in general, and the local context in particular.

The content of these documents answers the three sub-questions, which include the following points:

1. Teaching practices involving the FoK approach in teaching ethnic minority primary students both nationwide and in the local context.

2. Transformation and effects from those programs and policies relating to ethnic minority students' FoK approach.
3. Exploration of any barriers associated with the implementation of educational ethnic minority programs.
4. Support for interview questions and schedule trajectory in the research process.

Teacher-supplied evidence of their teaching

The second type of documentation includes teacher-supplied information on teaching, documenting classroom interaction based on the teachers' everyday teaching and/or their handbooks. They include the following documents:

1. Teachers' dairies where Kinh primary teachers' curriculum uses of HMông students' FoK, such as HMông language, local traditional culture, and other resources.
2. Lesson plans of teachers: These might provide signals of FoK of students from two aspects:
 - The funds of HMông students' knowledge and other cultural resources that Kinh primary teachers could draw upon to meet their learning goal.
 - Kinh teachers' teaching strategies drawing upon HMông students' FoK for engaging in the classroom environment.

Documenting the material illustrated when, how and why the Kinh primary teachers adopted their HMông students' FoK and directed pedagogical practices toward a FoK approach in every lesson. In terms of teaching choices and pedagogy in the classroom, information supplied by teachers about their teaching is a critical aspect, albeit a source that has limitations.

In this research, the decision was made to not use the observation method because it may have disadvantages when it comes to processing data collection. In Việt Nam, classroom observation is customarily used to evaluate the professional development of teachers; thus, employing classroom observation could cause both teachers and students to become worried and anxious. Moreover, participant-observation can influence both the criteria and results; that is, create doubts regarding

the neutrality and objectivity of scientific knowledge. To avoid such risks, Da silveira e Silva and Sznalwar (2012) argued that the researcher needs to look for positive characteristics such as good listening skills, empathy, good ability to adapt to unexpected situations and an ability to formulate pertinent questions. This researcher also decided against classroom observations in order to avoid possible risks to HMông students, who often are considered as shy and sensitive children in school.

4.5. DATA ANALYSIS

Recent qualitative research literature suggested that data analysis should use the processes of coding and categorising (Creswell, 2012). According to Creswell (2014), the process of data analysis involves in six steps:

1. Organising and preparing the data for analysis
2. Reading through all the data
3. Coding the data
4. Description of the themes for analysis
5. Interrelating Themes/Descriptions
6. Interpreting the meaning of Themes/Descriptions

In the current study, data collected from the field trip were processed and analysed following the main steps as shown in Figure 4.1

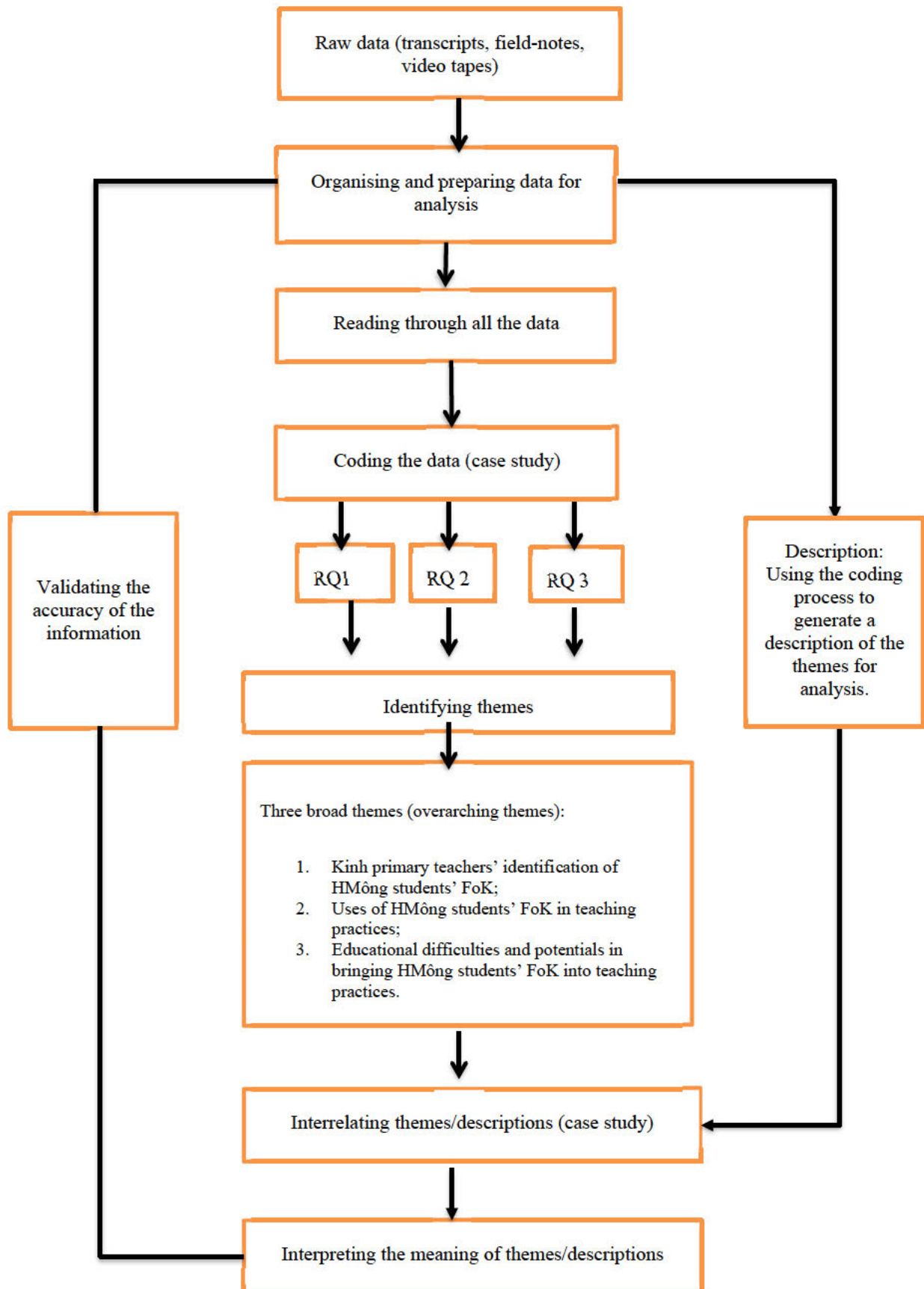


Figure 4.1: Data analysis in this research

Transcribing Data

First, the collected data were organised and prepared for analysis. This involved transcribing interviews, typing field notes and sorting the data into different groups depending on the sources of information (Creswell, 2012).

The amount and form of transcription draws on different factors such as the nature of the materials, aim of the research, time and money issues, and responsibility of the typist (Brinkmann & Kvale, 2018). In the current research, as a PhD student with time and resource constraints, the researcher transcribed her own interviews.

To ensure reliability of the data, the researcher asked a Vietnamese person to listen independently to the interviews and check the transcripts for correspondence between the original oral and the written transcripts.

Translating Data

Liamputtong (2010) pointed out that language differences can be a significant obstacle in multicultural research when English is not the first language of participants, though used for the research report.

The process of analysing data in this research was particularly challenging because all participants were interviewed in Tiếng Việt, their first and preferred language. Hence, all interview questions were first translated verbatim into Tiếng Việt by this researcher, who is bilingual in Tiếng Việt and English. As one who had been teaching as a lecturer at a college in Việt Nam, she could well understand the language and cultural-social backgrounds of the participants and so was deemed the best person to translate her interview data. As Liamputtong (2010, p. 137) suggested, the bicultural researcher is in '[the] most suitable position in doing cross-cultural research in order to overcome linguistic barriers in cross-cultural research'. On completion of the transcription of participant interviews, the next step was translating the transcription into English for analysing the data.

However, translation is not a technical process, and poses challenges. As explained in Section 1.6.1,

‘Researcher’s funds of knowledge’, Tiếng Việt can be literally and directly translated word-for-word as ‘language Viet’, and likewise Tiếng Anh can be similarly translated as ‘language English’. Such a method of translation is important from an educational research perspective because it highlights the divergences between the two languages and thus the intellectual cultures to which the languages provide access, while still making the meaning accessible. Considering another example, the title for this thesis in Tiếng Anh (language English) is as follows: “HMông students’ funds of knowledge: A case study of Kinh primary school teachers’ practices”. However, its translation in Tiếng Việt is not without its challenges. First, the title for this thesis in Tiếng Anh (language English) is as follows: ‘HMông students’ is translated as ‘*học sinh HMông*’. However, the concept of ‘funds of knowledge’ cannot be directly translated into Tiếng Việt but instead an explanatory translation has been provided (*tài nguyên tri thức*), a back translation of which reads as ‘intellectual knowledge’, *của* mean ‘of’.

Throughout this thesis HMông and Việt Nam are written in Tiếng Việt, unless quoted from other sources. Why is this important? There are two reasons. First, it is necessary to understand the challenges FoK poses for Kinh teachers working with HMông students’ repertoire of knowledge-and-languages. As can be seen in these examples, the work of relating knowledge in Tiếng Việt and Tiếng Anh is a complicated and complex undertaking. Second, knowledge generated through this research is intended to inform the work of teachers and teacher educators in Việt Nam, so it is important that as part of this research project, consideration be given to how the key concepts from this study might be represented in Tiếng Việt.

During the translation process, the researcher encountered difficulties finding equivalent English words, terms, or phrases that conveyed equivalent meanings to the Vietnamese words and phrases used in the interviews. For example, there were constraints in obtaining corresponding words for the concept *HMông students’ funds of knowledge* in Tiếng Việt. The term can be translated into Tiếng Việt in different ways and each version carries with it the translator’s connotation and perspective, any of which would have had an influence on the interviewees’ perspectives and understanding. In these cases, the words and phrases were discussed in some detail with the researcher’s supervisor, who assisted in the articulation of appropriate translations. In some cases, when the researcher was not able to determine equivalent words in English, the explanation in

English was given and Tiếng Việt also provided, so that Vietnamese readers could ascertain the authentic meaning of the text.

During the field trip in Việt Nam, the first three interviews were transcribed, translated into English, and then sent to the researcher's supervisor in Australia to improve interviewing techniques and achieve rich data from participants. Heeding his advice and feedback, the researcher continued to interview other participants. Due to time limitations, the transcription of the remaining 26 interviews was processed by the researcher after returning to Australia. During the process of translating, the supervisor lent the researcher considerable support in finding equivalent English words and phrases that harmonised with Tiếng Việt.

Open coding

After the researcher had read through all the data to obtain a general sense of the information, the next step, detailed analysis, was commenced with a coding process. Coding is the process in which material is organised into chunks or segments and then made meaningful to the information (Creswell, 2014). This process engages the researcher in a systematic process of analysing textual data such as texts, pictures taken during data collection, and segmenting sentences, paragraphs and images that are clustered into similar categories and labelling those categories with a topic title using the best descriptive wording.

This study used both main approaches to code the data: by hand (paper) and by using qualitative data analysis software -- NVivo. The initial process of transcription and translation on paper helped the researcher to become familiar with the data (Creswell, 2012; Brinkmann & Kvale, 2018). From this process, the researcher 'got a sense of the whole', that is, a general understanding of the data (Creswell, 2012, p. 244). Next, the process of coding data was facilitated through importing the transcribed data to NVivo. Each transcript was read through, and then each phrase or section of text that related to a specific theme or issue was allocated to a node in NVivo.

Through NVivo, coding summaries of each node by source from individual participants were uncovered and categorized into similar nodes, while overlapping ones were deleted and new categories were added when necessary.

Creswell (2012) presented three different levels of coding steps, which were used for the current research to settle the main themes (Figure 4.2).

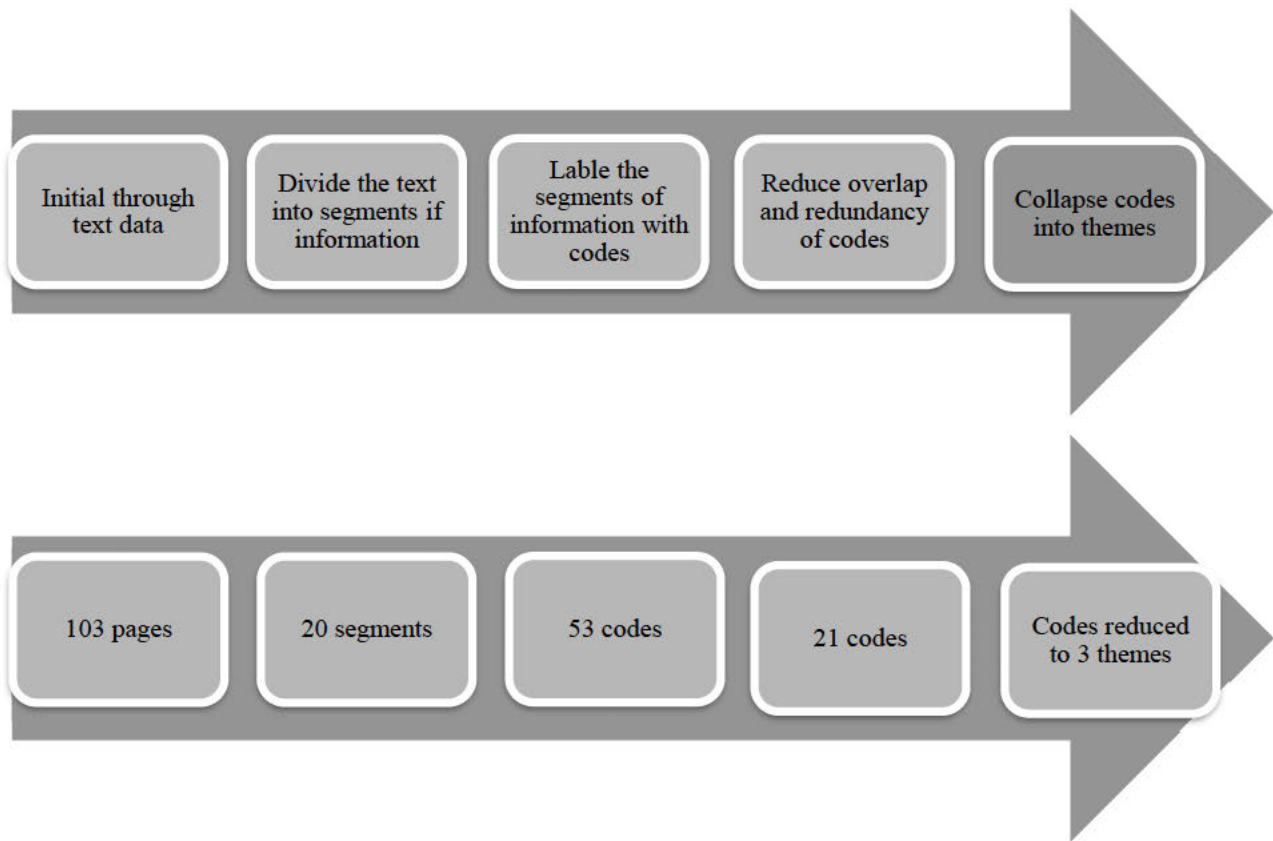


Figure 4.2: A Visual Model of the Coding Process in Qualitative Research (adapted by Creswell, 2012)

Based on Creswell's (2012) model, the researcher read through the transcribed text of the first interview and then tried to code the text data into 53 codes. These codes were the words or phrases that normally were used by the researcher and the participants. In the next step, the researcher looked for similar and redundant codes that appeared while labeling, reducing to 21 codes. These 21 codes then were collapsed into three themes to become the major headings of the chapters on findings.

Categorisation

In the next stage of analysis, the researcher analysed data from the interviews to explore Kinh primary teachers' curriculum uses of HMông students' FoK. Again, the researcher highlighted episodes with key points in order to fit them into subcategories. Table 4.5 shows the core categories of the sources of FoK of HMông students that were uncovered by Kinh teachers and developed in this process.

Thematic analysis

The next step involves using coding process to generate descriptions of the thematic categories, as Creswell (2014) showed that this analysis is suitable and useful in designing a case study. Thematic analysis focuses on identifying closely familiar themes and patterns in the qualitative data and then developing, defining and reporting such themes (patterns) (Guest et al., 2012). Figure 4.3 shows a themes tree using of HMông students' FoK for classroom pedagogy through focused coding.

Table 4.5: Sub-categories - Patterns of pedagogical actions through initial coding

Core categories	Categories	Sub-categories – source of HMông students' FoK through initial coding uncovered by Kinh teachers		
		Teacher Lai	Teacher Ly	Teacher Hong
Family-based Funds of knowledge	Understanding HMông parents' occupations	Being unaware of value of traditional jobs of HMông students' families (Teacher Lai, at the time recording 00:28:50).	Being aware of traditional jobs of HMông students' families (e.g. growing rice) (Teacher Ly at the time recording 00:30:42).	Being aware of traditional jobs of HMông students' families (e.g. farming and husbandry) (Teacher Hong at the time recording 00:27:27).
	Appreciating HMông parents' language	Recognising necessity of HMông language to teaching practices. (Teacher Lai, at the time recording 00:42:50)	Criticising HMông language by addressing negative effects on teaching practices (Teacher Ly, at the time recording 00:35:46).	Using HMông students' language to support teaching in class. (Teacher Hong, at the time recording 00:28:54).
	Recognising HMông families' cultural artefacts (music, stories, poems, artefacts).	Admiration of HMông' skills in hand making tools of labour; borrowing artefacts of HMông parents during hoe visits to share and learn together in class. (Teacher Lai, at the time recording 00:15:50)	Eliciting HMông students' sharing of their intellectual resources such as poems or folk songs in class. (Teacher Ly, at the time recording 00:20:46).	Asking HMông students to interview their grandparents about folk songs and folk stories of HMông community. (Teacher Hong, at the time recording 00:25:30).
Community-based Funds of knowledge		Coordinating with HMông parents and HMông students to celebrate HMông New Year event. (Teacher Lai, at the time recording 00:20:15).	Providing HMông students' cultural practices and festival of the Kinh group that are different from theirs. (Teacher Ly, at the time recording 00:29:46).	Asking students to give up their traditional cultural festival and practices due to negative effects on their study such as dropping out of school during their festivals. (Teacher Hong, at the time recording 00:32:30).
HMông students' interests and talents	Valuing students' interests and talents	Facilitating HMông students' embroidery skill to develop different curriculum activities. (Teacher La, at the time recording 00:50:50).	Asking older HMông students for translating and explaining of difficult Vietnamese vocabulary into HMông language for younger children in class. (Teacher Ly, at the time recording 00:43:46).	Asking HMông students about teaching HMông language for teaching purposes. (Teacher Hong, at the time recording 00:58:54).

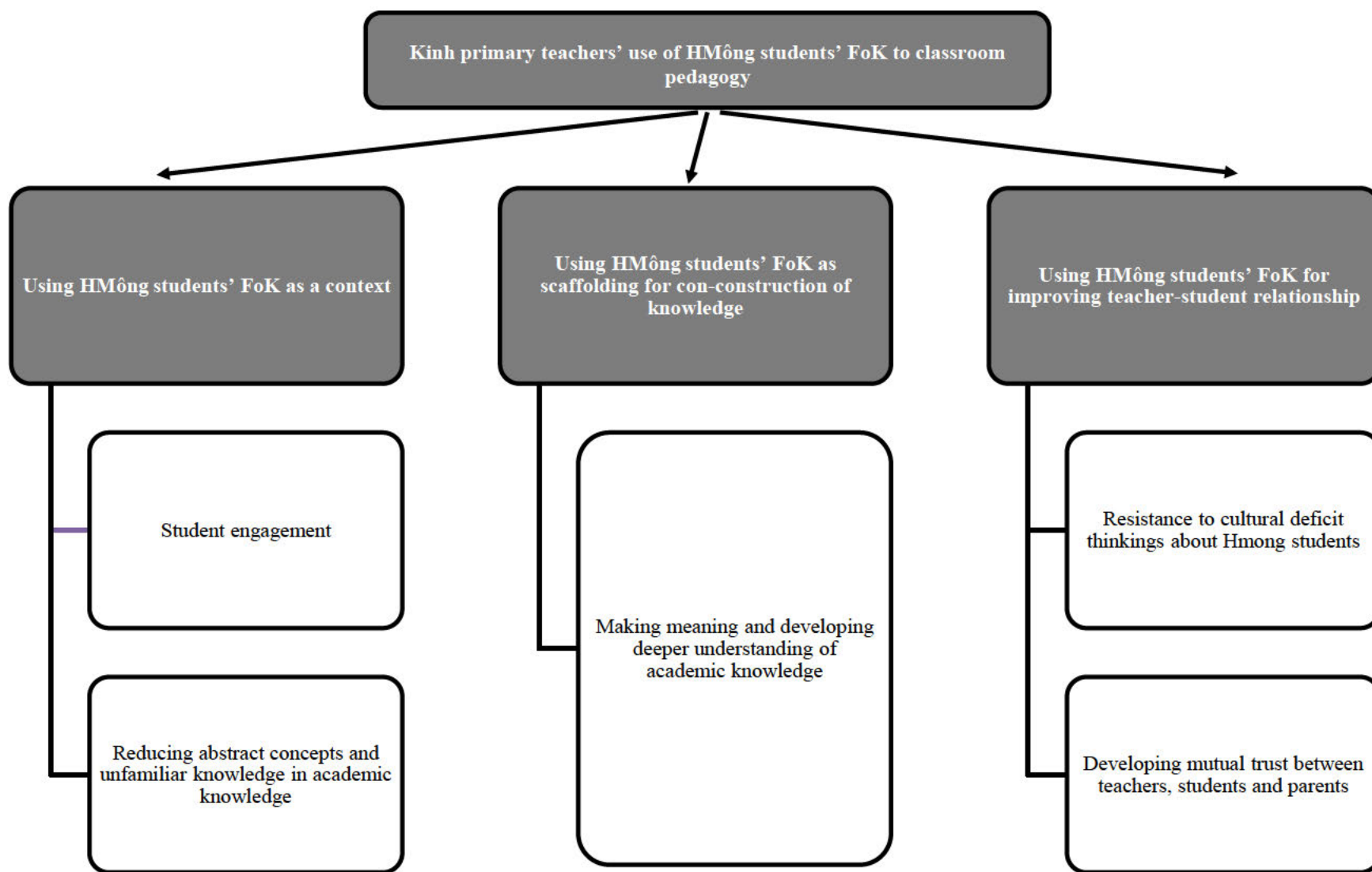


Figure 4.3: Themes tree of Kinh primary teachers' use of HMông students' funds of knowledge in classroom pedagogy

According to Mudavanhu (2017, p. 193) one of the purposes of the literature review is to “provide novices with an important lesson of how to use literature in the discussion of findings.”

This early career researcher tries to use the literature in chapters providing analysis of the evidence and in discussion of the research findings through making direct and thoughtful links between the evidence and the findings. Mudavanhu (2017, p. 198) referred to the potential problem of confirmation bias, cautioning, “when literature is used in discussion of findings often it was used to confirm what was already known, and not to show how studies reported contribute to knowledge.” Hence, in her literature review, the researcher in this study tries to explore findings that are consistent with and/or different from those in studies by others. In particular, the researcher makes a concerted effort to return to the literature that she cited at the beginning and use this literature to discuss the research findings.

4.6. CONCLUSION

This chapter has described and discussed the research design, rationale for choosing participants, methods, data collection procedure and data analysis process needed to explore Kinh primary teachers’ curriculum uses of HMông students’ FoK.

Chapters 5, 6, and 7 present the analyses of evidence collected for this study. These data analysis chapters illustrate how the methods explained in this chapter have been applied.

CHAPTER 5. KINH TEACHERS' IDENTIFICATION OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

5.1. INTRODUCTION

This chapter presents and analyses evidence in relation to the first contributory research question: what sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula? The methods for sourcing, collecting and analysing evidence relating to this question are, as explained in Chapter 4, illustrated throughout this chapter. Evidence to address this contributory research question was sourced from 26 Kinh primary teachers working with HMông students. Throughout this thesis pseudonyms have been used for the teachers, for example Teacher Lan, Teacher Theu, Teacher Huong. In Việt Nam, teachers are addressed by their given name rather than their surname, because there many people with surnames such Le, Nguyen, and Tran.

This evidence was collected through in-depth interviews with these teachers. The interviews made it possible to examine what intellectual resources and experiences of HMông children and their families Kinh primary teachers explored for teaching purposes. Key concepts from the FoK framework developed in Chapter 3 are during analysis of the evidence presented here about Kinh primary teachers' curriculum uses of HMông students' knowledge. Specifically, the following FoK concepts are used for data analysis purposes: *home visits* (González, 1995); *funds of identity* (Saubich and Guitart, 2011); *mutual trust* (González & Moll, 2002); *children's FoK-based interests* (Hedges et al., 2011) and *dark FoK* (Zinpin, 2009).

In addition, the literature reviewed in Chapter 2 is brought to bear to extend the interpretation presented in this chapter and to draw comparisons between the knowledge generated through this study and previous research. This comparison between the literature and findings from this study provide a basis for judging the originality of this study's contribution to knowledge, which is the focus of Chapter 8.

This chapter provides the variety of FoK resources of HMông students explored by Kinh primary teachers for their teaching. In the research literature, sources of FoK is a controversial concept that offers different definitions. To accomplish the aims of this study and address the first research question, the definition of FoK will be dealt with as a contested and contestable term with which to explore the diverse sources of FoK of HMông students and their community. Analysis of the data and findings revealed three main themes in the concept of FoK sources: (1) family-based FoK (parents' occupations, parents' language and cultural artefacts); (2) community-based FoK (cultural events) and (3) HMông students' own FoK. This chapter begins with a discussion of approaches through which Kinh primary teachers note and identify diverse sources of FoK of HMông students and their parents for teaching purposes.

5.2. METHODOLOGY TO EXPLORE HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

Noticing FoK helps Kinh teachers to recognise available FoK of HMông students and then leverage the knowledge, resources and experiences for instructional design. Moll et al. (1992) have emphasised this as being an important first step in a FoK approach.

In this study, Kinh primary teachers in various ways have noticed HMông students' language, knowledge, practices and daily life experiences.

First, a home visit is one of the most popular methods among Kinh teachers for exploring the cultural knowledge and practices of HMông students and their families. For clarity, a home visit is to be understood as Kinh primary teachers' visits to HMông students' out-of-school homes to accumulate and document the knowledge and skills of HMông households for educational purposes.

Kinh teachers interviewed described different experiences with HMông parents and their children during home visits. Teacher Lan and Teacher Tam with 15 years of experience teaching HMông students in Khiz Zangx semi-boardings primary school shared their experiences while visiting HMông' homes:

I often do not prepare anything or any content when visiting my students' house. I want to make a friendly conversation with them. And depending on different situations I have different questions (Teacher Lan).

I often visit the HMông students' houses without notification. I also do not plan anything to make our meeting natural. We can meet together anywhere, in the garden, in the yard, or inside the house (Teacher Tam).

In this example, both Teacher Lan and Teacher Tam do not prepare anything before visiting HMông students' households. They also are aware that their visits are not for school purposes, such as their children's learning outcomes or school fees. They have similar purposes, that is, exploring HMông cultural resources, their experience and practices in farming and agriculture, or understanding the difficult living conditions of their HMông students.

While home visiting, Teacher Chinh shared using the HMông language and stories from her own life as effective ways to encourage conversations and HMông families' stories:

In every home visit, I always try to speak in HMông language to make a friendly and open atmosphere with ethnic HMông parents. I also share difficulties in my life and my job with them such as my family, my language barrier, and my different culture background (Teacher Chinh).

Teacher Chinh impressed that speaking the HMông mother tongue and sharing personal stories with HMông parents helped them feel there was no distance between them. As a result, this helped the teacher draw HMông parents to open up and share the stories embedded in their cultural knowledge and experiences comfortably and naturally.

With Teacher Lai, she showed her experience when she intends to explore the economic knowledge of a HMông household during a home visit:

Whenever I visit a HMông child's house, first I often share my own experiences to increase my income, besides my teaching job. Next, I ask them about their daily experiences and practices...what they are planting now and how productivity in this season is (Teacher Lai).

Furthermore, to explore HMông students' FoK, many teacher interviews showed they not only communicate with HMông parents during home visits but also observe how HMông parents arrange and decorate their houses. Teacher Lan enhanced her understanding of HMông people's FoK by taking notice of the furniture and artefacts in HMông' houses. She said:

Fist, I often look at the HMông students' houses' structure, how they organize their furniture or decorate their artefacts (e.g. musical instruments or agricultural tools). Sometimes, I ask them to bring some artefacts to the class for teaching purposes (Teacher Lan).

Teacher Lan understands how to draw on HMông parents' cultural intellectual knowledge, such as that displayed in artefacts, and how to incorporate it in her teaching curriculum by inviting their presentation in class. She initially knows how to transmit HMông students' FoK to the classroom environment for teaching purposes.

Evidence of the findings from home visits shows that this method provides Kinh teachers with considerable assistance in their efforts to bring HMông students' FoK to school settings. First, visiting HMông students' households provides Kinh primary teachers with opportunities to understand the cultural values, daily life experiences and practices, and special circumstances of HMông students and their families (Teacher Lan, Teacher Tam). Second, in terms of connection between teachers and HMông parents and children, many Kinh teachers reported after visiting that they changed their negative views of HMông students and become more empathetic (Teacher Lai, Teacher Chinh, Teacher Tuyen, Teacher Hoa). Teacher Tuyen said:

I found seven family members living in one house, including parents and five children. My student was the oldest sister at seven years old and she was expected to participate in household chores such as caring for younger siblings, cooking, and feeding the animals up in the field. I learned to understand when my student was unable to go to school, did not do homework or slept in the class (Teacher Tuyen).

In the example of Teacher Tuyen, there is evidence of understanding and developing “mutual trust” (González & Moll, 2002) between Kinh teachers and HMông parents and students after home visits, closing the gap between them and changing her attitude and teaching practices toward this HMông student in class.

Teacher Hoa, with 19 years of teaching experience and a Year 1 team leader, also confirmed that:

Through home visits and warm conversation, I found HMông people are very friendly, truthful, and honest (Teacher Hoa).

Through home visits and methods of communication and observation, it appears many Kinh primary teachers explore the cultural values, daily knowledge, and experiences of HMông students and their parents. Significantly, many have also shifted their views toward more positive and empathetic perspectives of their HMông children and parents.

The second important FoK method referred to in some Kinh teacher interviews is their seeking the support of their colleagues who are HMông, sharing the same language and cultural background with HMông children. Teacher Nha described that her HMông colleagues teach her HMông language to help improve communication with her HMông students or sometimes help her by explaining difficult academic concepts in lessons.

Another approach taken by Kinh primary teachers to learn HMông students’ FoK is talking with them during their school breaks or with their parents when they appear at the school to collect their children. During these times, the teachers talk about their HMông students’ and community culture, embroidery or the parents’ agricultural production.

By contrast, some Kinh teachers interviewed can be placed in another group of those who visited HMông family homes only to raise the parents' awareness of important educational values and monitor their children's lives at school, including school attendance, study performance and/or health-related issues. These Kinh teachers reported they did not visit their students' homes to learn about the knowledge or experiences in their everyday lives, but simply to learn a few HMông words to help them communicate with HMông parents. Though these Kinh teachers did visit their students' households they did not employ ethnographic method (González et al., 2005; Moll, 2014) to explore their HMông students' FoK for teaching purposes.

Despite making home visits to explore HMông students' and their families' FoK for educational purposes, all Kinh primary teachers interviewed admitted to facing many challenges when doing so. For example, differences in language and cultural knowledge presented both Kinh teachers and HMông parents with significant communication problems in conveying knowledge, experiences and other possible resources. Moreover, meetings with HMông parents often failed to materialise as they regularly worked in the fields the whole day, especially during harvest (Teacher Lan, Teacher Hoa, Teacher Chinh). In addition, long distances and transportation difficulties between the school and HMông students' houses also limited the number of possible home visits by Kinh primary teachers (Teacher Lan, Teacher Luong, Teacher Huyen). Finally, these teachers lacked support from the school over time and finance issues arising in the making of these home visits, as they continued to bear the daily responsibilities of classroom teaching (Teacher Hoa, Teacher Chinh, Teacher Nha, Teacher Huong).

In summary, spending time with HMông parents, HMông communities and HMông teachers provided opportunities for many Kinh primary teachers to identify and nurture a sufficiently deep understanding of HMông's FoK to be able to draw on their FoK and develop ideas for transmission into pedagogical practices focussing on a FoK approach. These opportunities arose in various settings such as HMông houses, HMông families' gardens, in the fields, or in school settings. In contrast, the Kinh counterparts interviewed admitted they only visited HMông families to monitor their children's studies at school.

5.3. KINH TEACHERS UNCOVER HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

This study encompasses three themes of HMông students' sources of FoK. The first theme involves HMông family-based FoK, emphasising accumulated FoK from HMông households, the parents in particular. In so doing, Kinh primary teachers found that HMông household knowledge is broad and diverse, including farming, animal husbandry and practices regarding their language, and cultural artefacts. The second theme FoK emphasises the local cultural dimensions of HMông communities within their regional contexts. Finally, HMông students' own FoK in embroidery and bilingualism constitute the last theme of HMông students' source FoK.

5.3.1. Family-based funds of knowledge

Findings from the interviews of Kinh teachers make clear that HMông families are powerful primary resources that influence HMông children's FoK. These knowledge resources fall into three categories: (1) the occupational FoK of HMông parents both in and out of the home; (2) parents' HMông language, (3) and HMông families' cultural artefacts. This knowledge is moulded and embedded in labour practices, everyday life activities and everyday contexts.

5.3.1.1. Parents' occupations

Out of the HMông house

Moll et al. (1992) and Moje et al. (2004) stated that home-based FoK usually involves parents' jobs in and out of the home. In terms of jobs outside the home, many Kinh teachers interviewed raised the theme of farming and husbandry knowledge when exploring sources of HMông students' FoK. Through visiting the households of HMông students, the Kinh teachers in this research found that HMông parents work in the fields, take care of animals (pigs) and grow rice in terrace fields that are very far away from their homes. They are also very skilled in farming, especially in vulnerable and disadvantaged areas. From observing the farming activities of HMông parents, HMông children have demonstrated knowledge of farming and agricultural equipment. In Luong Minh Phuong's (2015) study of the cultural characteristics of HMông children in relation to the teaching

and learning of HMông students at school, he described the important role HMông parents play through their detailed demonstrative actions, teaching their children how to perform housework such as producing alcohol, planting maize (the boys) or embroidery (the girls).

Luong Minh Phuong and Nieke (2013) described, “family based teaching” as the first educational channel, within which HMông children are taught by their parents and grandparents, who impart language and cultural knowledge, and other skills such as housework and embroidery. Saubich and Guitart (2011) also showed the daily human activities, habits, customs, and language of all families are aspects of life to be explored for FoK.

In one interview, Teacher Luong who is a team leader for Year 1 HMông students at Khiz Zangx semi-boarding primary school described how her HMông students acquire their parents’ knowledge of farming and agriculture in disadvantaged and vulnerable areas. Teacher Luong reflected on these students’ planting of rice in the terraced fields. She described how the children knew that the main steps for growing rice in fields in highland areas were different from those in the lowlands and they also knew how to pick tealeaves in the correct way during the harvest. Teacher Luong said:

I found that compared to Kinh children, practical skills of minority students are better than those of many Kinh children. Through home visiting, I found many of my HMông students go to the fields with the parents. They have typical knowledge about how to work in the unfertile fields or terrace fields and feeding buffalos in the field with their parents (Teacher Luong).

Teacher Luong supposed that in HMông’s family, growing rice and husbandry are “bodies of knowledge that underlie household activities” (Moll, 2000, p. 258) and might be important resources for literacy, geography or nature science subjects that can support her learning at school. At this point, teacher Luong began to view the HMông’s families as resilient households, managing *dark FoK* (Zipin, 2009) in their farming production, rather than minority households that were struggling with difficulties in their living environment.

Teacher Nhan is a Kinh teacher of a multi grade class (*lớp ghép*) of Year 2 and Year 3 students, at a satellite school (*điểm trường lẻ*) of Trâu Piôr semi-boarding primary school. She said:

My HMông students are very good at farming. HMông students have known how to use tools in agriculture since they were small (Teacher Nhan).

Both Teacher Luong and Teacher Nhan claim the funds of farming, feeding animals and other types of employment of HMông students' parents to be directly relevant to lessons and concepts related to farming or animal husbandry in the school curriculum. In research of the incorporation of families' and children's FoK in education, Jovés et al. (2015) stated that the occupations and skills of parents, such as farming or cooking, might become resources to be integrated into the teaching and learning process.

Teacher Huyen, a female Kinh teacher of HMông students at Trâu Piôr semi-boarding primary school, reported:

In harvesting season, many of my students have to stay home to collect rice harvested in the fields. In the planting season, they also stay home to transplant rice with their parents. In the tea season, they have to pick tealeaves. They seem to work all year (Teacher Huyen).

Teacher Huyen's understanding of and empathy for particular situations and difficulties in the everyday lives of her HMông students could generally enable Kinh teachers to, beyond the classroom, understand their students as whole persons and acquire added resources for lesson transformation. As Templeton (2013) stated, exploring the differences in students' FoK might help teachers to gain a better understanding of the behaviour of their students and overcome prejudices.

In HMông households

Taking care of siblings is a common everyday activity of most HMông children when at home. Due to poverty and the shortage of labourers in the family, taking care younger sisters/brothers defaults to the older children. Their responsibilities increase during harvest season when the parents are in the fields all day, obliging these older children to either stay at home or bring their siblings with them to school. Teacher Phuong reported that:

Compared with my child - a Kinh girl of similar age, my minority students seem to have more experience in taking care their siblings. They know how to play with them or keep them from crying. Even HMông children studying in Year 1 have lots of knowledge and skills to take care of their brothers or sisters as well (Teacher Phuong).

Teacher Phuong confirmed that compared to Kinh students (the dominant group), HMông students are more experienced in taking care of their sisters/brothers. Teacher Dao who is a Year 2 team leader and HMông language teacher at Khiz Zangx semi-boarding primary school said:

Many of my students have to bring their younger sisters to the classroom to take care them. If not, they have to stay at home. I am a teacher so I want my students attend school often. Thus, I have to allow them to bring their sisters to my class. To keep the small children quiet, I have to give them food or candies. In my 20 teaching years, I have always had candies or noodles in my bag for those little kids. I even brought clothes and shoes for them on cold days (Teacher Dao).

Teacher Dao seemed sympathetic with her HMông students because of their workloads at home and disadvantaged family living conditions. Many Kinh teachers interviewed noted that outside of school, their students have to take care their younger brother/sister and do a lot of work at the same time. At this point, Kinh teachers did not talk about sibling care knowledge as *dark FoK* (Zipin, 2009) that could become an educational resource for their teaching practices -- though it did help teacher Dao to better understand her HMông students' behaviour in the classroom (such as falling

asleep during lessons or being distracted) -- and develop the empirical thinking and judgment to minimise their deficit thinking toward ethnic minority students and their community.

On the other hand, some Kinh teachers interviewed considered the forcing of older HMông children to take care of their younger siblings during class hours to be child labour that leads to poor performance in school or makes these children more likely to arrive at school tired and to be more distracted, particularly the HMông girl students. Other than teacher Dao, these Kinh teachers regard the domestic chores of HMông students as classroom obstacles that negatively affect learning (Teacher Ly, Teacher Yen, Teacher Chinh). They have not considered using knowledge of HMông students' sibling care activities as a potential form of knowledge to engage the children's study and facilitate the teaching and learning process. However, it also suggests an opportunity for creating new kinds of teaching conditions, which is the main purpose of the FoK approach.

5.3.1.2. Parents' HMông language

As Luong Minh Phuong (2015, p. 147) said, "the strong sense of collective identity of the HMông is shown in their unity of language." HMông children have been orally educated through generations to preserve their language (Luong Minh Phuong, 2015). Kinh teachers interviewed said that in class HMông students are encouraged to speak Tiếng Việt, however they found that most HMông children favoured the use of their mother language to communicate with each other both inside and out of school.

Kinh teachers in this study had different perspectives on using the linguistic FoK of HMông students in the classroom when these children brought their mother language into the school environment. A large number of Kinh primary teachers said the role of the HMông language is a crucial and the popular resource in teaching HMông students. They spoke of incidents in which they had to employ explicit knowledge of the students' the first language. To many Kinh primary teachers, the HMông language is considered a language of instruction alongside Vietnamese for teaching HMông students, particularly in teaching them Tiếng Việt. In classes for Years 1, 2 or 3, Kinh teachers need to regularly use the HMông language as an available fund to teach them Tiếng Việt. If not, these HMông students might not understand the lessons or become bored or distract the teacher. Kinh teachers said that they must resort to HMông language to explain or raise

questions to their students, especially the smaller children. Many Kinh teachers have acknowledged that the study of HMông language and its integration assists both HMông students and Kinh teachers in the learning and teaching process and enhances HMông children's Tiếng Việt learning as well.

Teacher Lan expressed that teaching literacy mostly draws on HMông students' language through the use of direct rote instruction and oral comprehension. She explained:

I think HMông children, especially the smaller children, start school with low Tiếng Việt abilities. They understand only a little Tiếng Việt (language Vietnamese), many of them do not know any Vietnamese words. Therefore, employing their HMông language and culture will help them more (Teacher Lan).

Teacher Anh was a bilingual teacher (Kinh and HMông) who taught Year 2 and Year 3 at Khiz Zangx semi-boarding primary school. She was a qualified teacher with twenty years of experience teaching HMông students. Teacher Anh was the Professional Head of Years 2 and 3 and responsible for Tiếng Việt for these years. She discussed how her HMông students' lack of confidence regarding Tiếng Việt literacy influenced their feelings about Tiếng Việt. She said, “I know many HMông children are really afraid of it [Tiếng Việt].” Teacher Anh also said in contrast “without using HMông language in the classroom we [HMông students and teachers] would be quite confused.” Her words:

To teachers teaching in Year 1 and Year 2, using the HMông language to teach and communicate with ethnic students is more frequent than others teaching in higher classes due to the language limitations of smaller HMông students. I have nine years of experience teaching grade one HMông students and I usually use two languages (Tiếng Việt and HMông) in parallel in the classroom (Teacher Anh).

Similarly, in a Tiếng Việt lesson when Teacher Loan asked her students “Have you ever visited Yên Bái city?” there were a few HMông students who understood and raised their hand, due to their vague understanding of the concept of ‘city’ and their teacher’s instructional language. However,

when Teacher Loan asked again in the HMông language “*Chaor cur tâu tuax hur tenhv Ênhz Bair chiz tâu?*” and interpreted the concept ‘city’ (*tenhv*) in their mother tongue, she said almost all the HMông children understood the question and became more active in the class.

While interviewing Kinh primary teachers, they admitted that most HMông primary school children have limited Tiếng Việt. Many of them do not know any Tiếng Việt at all before beginning school. Moreover, the smaller HMông children are often more shy and less self-confident than children in higher classes. Luong Minh Phuong (2015) found this language barrier hinders HMông students’ classroom engagement due to only equivocal understandings of abstract concepts when introduced to them by teachers using a different language and cultural knowledge (Tiếng Việt). This would explain why, of the Kinh teachers interviewed, those teaching lower classes (Years 1 and 2) often have bilingual capabilities (HMông language) to use with their HMông students compared to those Kinh who teach Years 3, 4 and 5.

These Kinh teachers, in general, had positive perspectives towards bilingualism. They believed that being bilingual brings many advantages, at least in terms of language. “Effective,” “good” or “important” were the words used in many Kinh primary teacher interviews when talking about themselves as bilinguals working with HMông students. Teacher Anh said: “*I think I have more advantage than them [other Kinh teachers]*”. Similarly, Teacher Loan believed that her teaching of HMông students was likely to be more effective compared to her colleagues, because she had nearly 20 years of opportunities to live with the HMông community and learn their language. Expressing their feelings of empowerment and satisfaction in being bilingual, these Kinh teachers seemed to be aware of their bilingualism as a valuable resource and symbolic capital in constructing more powerful and effective teaching practices for HMông students.

In short, viewing bilingualism as an educational resource, not a hindrance, the Kinh primary teachers showed a strong view toward HMông language FoK in teaching curricula or at least in terms of language issues. At this point, this finding affirms a *flexible bilingual pedagogy* (Creese & Blackledge, 2010, p. 112) that “adopts a translanguaging approach and is used by participants for identity performance as well as the business of language learning and teaching” as an effective method of making sense of content, abstract concepts in academic knowledge when teaching HMông students. Schumacher (2016, p. 16) stated the supportive relationship between the FoK

method and translanguaging:

Translanguaging is compatible with the Funds of Knowledge theory of pedagogy because it is building on how the students interact at home, and what their strengths are. Instead of feeling the need to adapt to learn, the classroom discourse is being adapted based on the cultural funds of knowledge already present.

For this reason, it would be more intuitive for many other Kinh teachers who have different language and cultural knowledge, educators, and policy makers to consider minority HMông language and cultural knowledge have the same opportunities and privilege in school curricula. This issue suggests educational policies for teacher strategies in exploring and learning HMông students' language FoK, especially Kinh primary teachers who have different language and background culture with HMông children and the community. When Kinh primary teachers have the capability of learning about HMông children's FoK and bringing those multiple resource into their teaching curriculum, there would be a potential "power shift" (Rodriguez, 2013) when more diverse forms of knowledge are recognised in the school environment.

In contrast, there were five Kinh teachers (Teacher Thai, Teacher Nhlen, Teacher Nhung, Teacher Ly, Teacher Hien) interviewed who reported that they did not recognise HMông language as a resource and rarely employed it in their teaching practices. The first reason for not using the HMông language is that it is quite different from their language backgrounds. Teacher Thai admitted:

We try our best to explain to HMông students in the HMông language to help them understand well. However, the level of difficulty of this language makes many Kinh teachers and me feel overwhelmed (Teacher Thai).

During the interview, Teacher Thai declared that the alphabet used by the HMông language was more difficult for her and other her colleagues than the Vietnamese alphabet. Teacher Thai explained that grammar and its diversity contributed to the difficulties of studying HMông language of many Kinh teachers.

Another reason explained by Teacher Nhen was that in her Year 4 and 5 grades, her HMông students had improved Tiếng Việt capabilities compared with students in lower grades and often communicated with her and their friends using Tiếng Việt. Hence, Teacher Nhen did not use the HMông language in the classroom. However, Nguyen Thi Thuy Trang (2019) argued that translanguaging among these older HMông students and their teachers in the school environment may constitute a threat against their mother tongue that moves it closer to the dominant language - Tiếng Việt. In research by Nguyen Thi Thuy Trang (2019) and Nguyen Thi Thuy Trang and Hamid (2016) of connections between translanguaging beliefs and practices, and identity construction among Vietnamese ethnic minority students, it was revealed that the drift in ethnic minority students' translanguaging toward the majority language was placing their minority language in harm's way. This research also warned that this translanguaging could induce a trans-identity of minority students with respect to the dominant norms.

Another reason is that many Kinh teachers cannot fully realise that the efficacy of employing the HMông language in their teaching practices is related to teacher language training and development. These Kinh teachers interviewed shared that HMông language training courses established by educational institutions at the local level taught a different HMông language than that used in the HMông community where they lived and taught. HMông parents who were asked for advice by some Kinh teachers said this kind of HMông language was quite different from their own. Teacher Nhung shared:

In the last summer, I took part in a short training course to learn HMông, but it was different from the HMông language spoken here. Thus, when I came back to teach my HMông students in Year 1, they could not understand what I meant (Teacher Nhung).

Teacher Nhung shared that her HMông language abilities were not as she expected prior to taking this course. She explained that HMông groups have various forms of HMông language, thus what she learned from the course risked being different from the HMông language of her students in reality. Teacher Nhung added that HMông language courses mostly helped her and other teachers

in learning HMông writing skills but not in overall communication with HMông people due to the limited duration of each training course.

Teacher interviews revealed that most Kinh primary teachers had not learned any HMông before coming to this region to teach HMông students, and a small faction said that they had learned about ethnic minority languages as part of their teacher training at College, but about other minority languages. Even if it were HMông, such training courses proved problematic because the dialect being taught was different from what they experienced in the real context.

Another important reason HMông language is not used is due to Kinh teachers' beliefs. They presume that HMông students should practice Tiếng Việt with Kinh teachers at school instead of encouraging HMông students to speak their mother tongue or requiring their Kinh teachers to speak the HMông language. For example, Teacher Nhien and Teacher Ly opined that Tiếng Việt was a language of modernisation to help these non-dominant students adapt to aspects of the culture and social relationships of dominant groups in Việt Nam. Moreover, they seemed to underestimate the value of ethnic mother tongues, considering them a barrier to children's academic achievement.

Some evidence from two Kinh teacher participants shows deficit discourses about the HMông language based on belief and attitude rather than observation (Teacher Ly, Teacher Hien). Teacher Ly, when asked if there was anything that could be done to improve HMông students' study and Tiếng Việt ability, replied, "*Don't speak HMông language at school.*"

Teacher Hien interviewed in this study had been teaching for ten years in the primary school and also taught Tiếng Việt to Year 5. She mentioned the importance of studying Tiếng Việt to HMông students, instead of using HMông language in the classroom. Teacher Hien said:

National curricula and textbooks are used nationwide in Việt Nam. My disadvantaged students should obtain different kinds of academic knowledge through various regions in Việt Nam in Tiếng Việt. They need to approach

new and advanced knowledge in modern society nowadays, instead of receiving encouragement in their mother tongue language (Teacher Hien).

Language and curriculum policies seem to have influenced and guided Teacher Ly and Teacher Hien's perspectives on teaching HMông students in terms of using language in her class. Consciously or not, such teacher comments resonate with cultural deficit thinking toward ethnic minority groups. Many Kinh teachers supposed that ethnic mother tongues should be restricted to Grade 1 (Aikman & Pridmore, 2001). According to Aikman and Pridmore (2001), HMông students' linguistic seemed to be marginalised completely in the school environment. Consequently, not much is known about how ethnic language is important and how ethnic minority children struggle in school. Amaro-Jiménez (2011) argued that separating two languages into bilingual programs is a misconception. In fact, there are times to bring them together for instructional purposes.

In summary, attitudes and approaches differ regarding the use of funds of HMông language knowledge in teaching practices. The first Kinh teacher group was adapting their teaching practices by learning their students' mother tongue knowledge, while the counter group appeared to struggle with or resist this source of HMông students' FoK.

5.3.1.3. HMông families' cultural artefacts

Funds of knowledge of HMông households are shown through their musical knowledge, folksongs, poems and other artefacts. HMông families are rich in musical knowledge. They also create their own musical instruments from leaves or wood to enrich their spiritual life.

Many Kinh primary teachers recognise and value the cultural artefacts of HMông families such as music or poetry. Teacher Phong described his visit to the home of a HMông student named Kua:

When I visited his house on summer afternoon, Kua's father was playing with a musical instrument called Kênh (HMông flute). During our talking time I commented about the musical instruments such Đàn môi (Lip lute) and Kèn lá (Qeej instrument) that were hanging on the bamboo wall of their house, and the

father said that they love folk songs and sing a lot at home after hard work days or in their free time or during special events. We discussed our musical hobbies, and he shared that he likes HMông music because of its beautiful lyrics. He also shared his knowledge of how to make these musical instruments and how they work (Teacher Phong).

In this example, Teacher Phong was not only aware of the funds of music knowledge in his student's family, but he also anticipated that the musical practices in Kua's home might potentially support his learning in the classroom.

Other artefacts of HMông households such as *Luz cov* (cái cở hoặc cái bè) and *Leiv trak* (dao quăng) are agricultural tools used by HMông parents and children in the fields. In her assessment of artefacts valued by HMông families, Teacher Nha expressed her admiration of HMông' skills in making work tools by hand. Teacher Nha noted that farming tools are important artefacts in the day-to-day agricultural activities of HMông families and also as products to be sold:

The HMông originally started to forge knives, hoes, or ploughshares just for hunting and farming. But these products have reached a high technical level and have become extremely famous for their sharpness and incredible durability and have become trade products for HMông families (Teacher Nha).

Another Kinh teacher reported:

The way I approach ethnic minority FoK is when I visit the households of HMông students I sometimes ask the parents or children if they have any artefacts related to their culture or daily life activities that they can bring to class in order to share and learn together (Teacher Huong).

Saubich and Guitart (2011) have stated that the artefacts people use might help to better understand their identities, routines, and FoK. In this regard, there are promising signals that some Kinh

teachers are aware of the importance and potential of engaging with local families and their knowledge.

Finally, among the significant artefacts of HMông families are the stories and poems that they compose in the process of their labour -- in an original context. Through home visits, Kinh teachers can explore a vast reservoir of HMông parents' and grandparents' folk stories that explains their histories, phenomena in their lives and production activities. All Kinh teachers reported that HMông children enjoyed spending time listening to their parents, grandparents or teachers tell such stories. As González et al. (2005, p. 12) acknowledged, "[t]he knowledge of grandparents, aunts and uncles, and extended family relations are also resources that go beyond the nuclear family". The above example demonstrates the significant contributions of relationships within HMông students' families to the children's FoK.

While being interviewed, Teacher Huong presented a poem written by her in the HMông language that described their everyday activities in the field and their love of labour. She explained that during visit to her HMông students' homes, their parents or grandparents often read HMông poems or sang folk songs to her. Teacher Huong wrote them down and sometimes used them in the classroom to support HMông student engagement in the class (see Appendix 6a).

5.3.2. Community-based funds of knowledge

Outside HMông household settings, Kinh primary teachers recognised and appreciated HMông community-based FoK such as cultural events. Nonetheless, when evidence from the interviews was analysed it became clear that the Kinh teachers had not made a strong commitment to using or understanding HMông communities' FoK.

Beyond the family, the Kinh teachers knew that HMông children participate in various social and cultural events in community settings. For example, HMông students do not attend school in order to participate with their parents in a cultural celebration of the HMông New Year or the worship festival for the ancestors of tea trees. Many Kinh teachers interviewed said that to the HMông community, cultural events and celebrations were so important to the children that they accepted their students' absence on these special days.

To bring cultural knowledge of the HMông New Year to school, Kinh teachers coordinated with the HMông parents and students to organise events such as making Chung cake (*bánh Chung* - traditional New Year's cake of the Kinh) as well as Day cake (*bánh Dầy* - traditional New Year's cake of the HMông) at school. The teachers and school principal wished to not only respect the cultural values of the HMông people but also wanted to introduce HMông parents and students to cultural New Year's features of the dominant group that they represent. In addition, Kinh teachers, with the help of HMông parents, created resources for their special times of the year such as HMông cultural and religious festivals. For example, HMông parents and children are encouraged to embroider various colourful patterns to decorate classroom study spaces.

However, not all of these experiences were to be recommended or appreciated by Kinh teachers due to the effects on their students' school attendance and learning outcomes. For example, most Kinh teachers interviewed suggested that the HMông community celebrate and enjoy New Year's events with Kinh groups in order to promote more regular attendance (Teacher Ly, Teacher Yen).

In Ngo Thi Thanh Tam' (2010) study, she referred to the fact that from the 1960s to 1990, the Vietnamese government banned any festivals or rituals and restricted the Mong people in Lào Cai to celebrating the New Year for just a few days instead of the traditional month. The study found while making efforts to establish their community in Việt Nam, the HMông have to face conflicts both with the Vietnamese government and themselves. It is becoming more and more of a struggle when decisions on socio-economic, agricultural and cultural aspects are controlled by many Vietnamese government programs (Ngo Thi Thanh Tam, 2010).

There is a dilemma here. On the one hand, the HMông students are arguably disadvantaged by not attending school during their festivals or cultural events. On the other hand, it is important for these children to remain well integrated in their existing culture, as it provides them with a lifelong community support system. This means that there is a constant interplay between sociocultural values, institutional practices of home, community and schooling, and the child's experiences. Thus, FoK would assist the school system in adjusting to accommodate their practices and build on this knowledge-based concept to educate HMông students.

5.3.3. HMông students' own funds of knowledge

A last source of FoK explored by Kinh primary teachers comes from HMông students' own knowledge, which includes their interests and talents. The concentration is on the individual knowledge of HMông students, not that of their family or community. This can be perceived as a potentially significant contribution of this thesis to knowledge when compared with previous FoK research that has perhaps too narrowly focused on students' parents and community (Hogg, 2011; Hedges et al., 2011). This section describes two kinds of FoK sources of HMông students: embroidery skills and bilingualism.

5.3.3.1. *Embroidery skills*

Regarded as a featured talent and interest of HMông students, embroidery skills are apparent both in and out of school. All Kinh teachers interviewed agreed that the children are very skilful in embroidery. This crucial knowledge has been passed on from peers, parents, and grandparents.

Everyday, during school break time or in the hostel after school, HMông children, especially HMông girls, often embroider patterns on their traditional skirts or clothing. Teacher Chinh described HMông students' expertise in and keenness for embroidery:

During break time at school, most my female students will embroider clothes. They are very skilful and their work often is used in important events like the HMông New Year holiday or in daily customs. I remember that last year, a HMông girl student in Year 3 named Pla showed me in detailed stages how to make a HMông traditional skirt. She also pulled some of her embroidered patterns from her school bag (Teacher Chinh).

From talking with the HMông girl, Teacher Chinh found that she was expert in this area. She thinks that this girl's talent might have come from her traditional family because she claimed to not know how to embroider when she was a little girl. This finding confirms Hedges et al.'s (2011) findings

that everyday experiences in family settings provide authentic learning opportunities for children which might affect their self-chosen interests in the future.

Teacher Nha - a Year 5 Kinh teacher of a subject named Basic Techniques at Khiz Zangx semi-boarding primary school claimed she was not surprised by her HMông students' skills with embroidery. Knowing how much they worked at it each day at school and following close observation, Teacher Nha recognised that HMông students' embroidery abilities and contented faces suggested powerful resources for teaching her subject, with many applications for their learning. Teacher Nha said, *"I soon realised that their knowledge and skills about embroidery were far greater than I had gleaned."* Describing the engagement of HMông students during her teaching time, Teacher Nha noted:

When they are required to make clothes or traditional skirts at home and bring them to class, they seem to be very excited and become active learners. They show me beautiful patterns that were embroidered on their clothes or skirts (Teacher Nha).

Teacher Nha recognised that her children's embroidery skills extended well beyond ordinary sewing and into creative design and style. The example from Teacher Nha showed that in exploring HMông students' FoK, Kinh teachers can enrich their own knowledge as well and then extend this to different curriculum activities that build up conceptual understandings for themselves and their students. Moreover, HMông students can teach them various kinds of embroidery they have not previously known.

Teacher Nhan with 23 years of teaching experience with HMông students in a multi grade class of Years 2 and 3, said:

They teach me how to embroider in different ways and with various patterns. After developing this skill, I have more experience and ability to teach them in craft subjects. They make me more experimental and confident while teaching this subject (Teacher Nhan).

Teacher Nhan's case illustrated a confluence of academic/formal and non-academic/informal knowledge and the intuitive method she can use in her everyday teaching practices with her HMông students.

5.3.3.2. Bilingualism of HMông students

Outside the classroom, Kinh teachers often ask older students who have Tiếng Việt ability about their culture, knowledge and selected HMông vocabulary they can explore or translate into Tiếng Việt for teaching purposes. One telling example is of a Kinh teacher who asked an older HMông boy about some HMông vocabulary she did not understand and doing so highlighted to her another critical FoK element: his bilingualism.

Teacher Loan described HMông bilingual ability as an important source that leads to small students' better engagement in class activities. She said that:

I sometimes invite older HMông students in Year 4-5 to my classroom (Year 1,2) to support my teaching. They help me to translate and explain difficult Vietnamese vocabulary into the HMông language for the little children. Thanks to these older HMông students, access to learning by the smaller HMông children seems to be made more comfortable (Teacher Loan).

Analysis suggests that student peers play an important role in helping smaller HMông students -- especially in Years 1 and 2 -- learn how to read and write Tiếng Việt at school. This finding reflects similarities with the research of Moje et al. (2004) into available funds for Spanish-dominant students outside of school, indicating the role played by peer FoK in providing mutual support learning science. Specifically, English background students help Spanish-dominant students with coaching and translating text at school.

Similarly, in exploring the FoK that a second-grade boy brings to school each day, Sugarman (2010) pointed out the biliterate ability of the boy was recognised by his teacher during home visits and promoted every day by his parents. However, in the current study, HMông students' biliteracy lacks the support of their parents due to their limited skills in Vietnamese.

HMông students' own knowledge acquired through their bilingual ability and cultural knowledge in this study confirms McLaughlin and Calabrese Barton's (2013, p. 29) argument that "through personal cultural knowledge each student offers insightful information and experiences to his or her classmates and teacher. With their unique cultural knowledge, students' become peer teachers within their classroom. Sharing cultural knowledge makes discussions much more engaging and allows teachers to see what students already know about a given topic".

In this context, it can be seen that the HMông students' bilingual capabilities are starting to be recognised for supporting Kinh primary teachers working with the HMông school children, especially small students for instance in cross-age peer language tutoring and in the teachers' communication with small HMông children. This clashes with the "language-as-problem" perspective defining language policies for minority languages in Việt Nam that hinders ethnic minority students in accessing education, maintaining their ethnic features and integrating into the mainstream (Nguyen Thi Thuy Trang & Hamid, 2018, p. 351).

For this reason, recognising and using HMông students' own knowledge has important meaning in the teaching and learning process for HMông ethnic children. This also contribute to extend limitations in FoK frameworks from previous FoK research that admitted the FoK approach focuses mostly on FoK of students' parents and their community (Hogg, 2011).

5.4. CONCLUSION

This chapter has addressed the research question regarding the kinds of FoK in relation to academic knowledge that are explored and employed by Kinh teachers. The teacher participants described, analysed and reflected upon their knowledge during conversations with the researcher. Through the use of extended interview transcripts, Kinh teachers' stories, and their commitment, different sources of HMông students' FoK that can support the teaching practices were explored. The

following sets out the key points that emerged from the analysis of evidence presented in this chapter.

First, there are wide-ranging sources of FoK of HMông students and their families. Kinh teachers pointed out that HMông students and their families have access to and use different social and cultural tools, and specific knowledge acquired through labour histories, social networks, and cultural and linguistic practices. Kinh teachers' identification of the valuable resources and knowledge of HMông students and their families, shows that many of these teachers view HMông minority students' knowledge as a potential resource for their pedagogical practices, rather than perceiving them and their families as low-awareness learners or of low economic status.

Second, through exploring and coming to understand their HMông students' FoK, the Kinh teachers developed their attitudes toward re-conceptualise HMông students' and their families' FoK sources not as barriers to children learning but as potential resources that can be tapped and integrated into teaching curricula and reduce deficit thinking about ethnic minority students. In this context, it can be seen that the Kinh teachers and HMông students' bilingual capabilities are educationally important for the teachers working with the HMông school children, for instance in cross-age peer language tutoring and in the teachers' communication with their HMông students. Moll's (2004, p. 162) research supportively stated that households foster "valuable knowledge and experiences that can foster children's development" and opposed views they are "lacking worthwhile knowledge and experiences" or that in such households the "children must be saved or rescued".

Third, exploring and bringing HMông students' FoK into classroom environments has not been without challenges for Kinh primary teachers. They must deal with problems such as language and cultural barriers, HMông parents' daily activities in the fields, long distances from school to HMông students' homes, and time and finance constraints of their school.

In reflecting upon the above FoK resources, it seems that the more meaningful inquiry would be to ask how pedagogical practices are employed by Kinh teachers to build on these types of FoK that HMông students bring with them into the classroom. This is investigated in the next chapter.

CHAPTER 6. USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN KINH TEACHERS' PRACTICES

6.1. INTRODUCTION

In Chapter 5, the researcher discussed HMông students' and their families' FoK resources as explored by Kinh primary teachers for their teaching. This chapter presents and analyses evidence in relation to the second contributory research question: how do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices? It aims to investigate what pedagogical practices Kinh teachers use to meaningfully absorb HMông children's FoK into their teaching curricula.

The data have been collected from in-depth interviews with 28 selected Kinh respondents, including 26 Kinh primary teachers and two school principals from Trâu Piôr semi-boardng primary school and Khiz Zangx semi-boardng primary school. All these participants were interviewed face-to-face.

The researcher examined the use of HMông students' FoK by Kinh primary teachers, and how they are related to and implemented in classroom teaching practices. Do Kinh primary teachers retrieve benefits from HMông students' FoK for their teaching, or do they suspect that these FoK would not really benefit either their teaching practices or HMông students' learning? What teaching strategies have Kinh primary teachers, in the context of these two Việt Nam primary schools, chosen for the implementation of HMông students' FoK? Data collection and analysis seeks to explore the reasons behind Kinh teachers' strategy preferences and the features of teaching strategies the participants perceived would bring HMông students' FoK into teaching curricula.

6.2. KINH TEACHERS' USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

This section focuses on the ways in which Kinh primary teachers made sense of and reacted to HMông students' FoK. The evidence shows varying connections between the processes through

which Kinh teachers identified these FoK resources and their classroom implementation.

Teacher interviews indicate that Kinh teachers understand and act upon the usefulness of HMông students' FoK in the teaching and learning process. That is, children's FoK are leveraged to foster various classroom activities, support their learning behaviours, and enhance their academic learning and study outcomes.

Data analysis showed Kinh teachers' practices using HMông students' FoK in teaching curricula. First, on a widespread level, most Kinh teachers used HMông students' out-of-school knowledge and experiences as a context to motivate classroom engagement. On a higher level, HMông students' FoK are less frequently used as scaffolding in the co-construction of academic knowledge at school in order to make meaning of academic knowledge and concepts. Finally, most Kinh teacher participants confirmed that they used HMông students' FoK for developing the relationships between teachers, HMông families, and their children. Table 6.1 describes three strategies employed by Kinh teacher participants to apply HMông students' FoK to contextualise the curricula.

Table 6.1: Kinh teachers' teaching strategies to using HMông students' funds of knowledge

KINH TEACHERS' TEACHING STRATEGIES	DESCRIPTION	EXAMPLE
Using FoK as a context	Kinh primary teachers use out-of-knowledge of HMông students as a context to link to academic knowledge at school to (1) facilitate students' classroom engagement and (2) reduce the use of abstract concepts and unfamiliar knowledge in creating academic knowledge.	Using familiar things in HMông daily life such as HMông language, farming, and tea trees.
Using FoK as scaffolding to co-construction of academic knowledge	Kinh teachers use HMông students' FoK as a scaffold for the co-construction of academic knowledge through making meaning and developing deeper understandings of academic knowledge and concepts. The teachers used sources of HMông students' FoK that they thought should be relevant to design classroom activities.	Using rice growing knowledge or embroidery knowledge of HMông students and their families to teach different subjects and lessons.

Using FoK for developing relationships between Kinh teachers and HMông students	Kinh teachers used HMông students' FoK as pedagogical tool to against deficit thinking to HMông students and create mutual trust, close the relationships between Kinh teachers, HMông students, and their parents.	After home visits of HMông families, Kinh teachers have a deeper understanding and knowledge about their HMông students' living conditions and cultural resources.

6.2.1. Funds of knowledge as the context for hooking HMông student learning

The most common strategy many Kinh primary teachers provided to link HMông students' FoK and school academics was using HMông students' FoK as the context for hooking their students on academic study. Here, Kinh teachers used HMông language, cultural and out-of-school knowledge and practices as contexts to talk about the academic content they wanted to introduce and discuss rather than using the contexts to scaffold school knowledge. These Kinh teachers often used HMông language and familiar contexts in an effort to (1) motivate their students in the classroom, especially their willingness to engage in a particular classroom activity, and (2) reduce abstract concepts and unfamiliar knowledge in academic knowledge.

A significant percentage of Kinh primary teachers exploited HMông students' mother tongue by using HMông language in the classroom. For example, Kinh teachers using their HMông students' mother tongue when teaching Tiếng Việt subjects suggested their students became more active learners, better engaged in learning activities. The example below reiterates the theme of FoK serving as a context for hooking HMông students' study of Tiếng Việt subjects.

Sometimes my HMông students cannot catch the meanings of many words in

reading lessons in Tiếng Việt subjects, thus I use HMông language to explain or transfer the meaning of those words, then use Tiếng Việt again. I recognise that when I teach them with their mother tongue, they become active learners in their second language and pick up new knowledge easily and quickly (Teacher Phu).

Teacher Phu, a bilingual, described a potential outcome from using HMông language while teaching Tiếng Việt subjects. Table 6.2 below shows the process in which he employs his HMông students' mother tongue to support them in engaging with his teaching practices and developing a deeper understanding of lessons in Tiếng Việt subjects. First, he uses HMông language to introduce new Vietnamese vocabulary to these students. He first will speak the words in HMông language to ensure her students understand the meanings. Once understood, his second step is to introduce those words in Tiếng Việt and develop new academic knowledge. In the final step, the role of HMông language continues to be promoted to help these children gain deeper insight and understanding. Teacher Phu stated that without this method, many HMông students could not imagine or comprehend the meanings/definitions of Vietnamese vocabulary due to their Tiếng Việt's limitations.

Table 6.2: Teacher Phu using bilingual language in the HMông classroom

Preview	<i>HMông language:</i> The bilingual teacher or a bilingual assistant gives an overview of the lesson activity in HMông language (the students' first language).
View	<i>Tiếng Việt:</i> The Kinh teacher teaches the lesson or directs the activity in Tiếng Việt using strategies for making the input comprehensible.
Review	<i>HMông language:</i> The Kinh teacher or HMông students summarise key ideas and raise questions about the lesson in their first language (HMông). Students can work in same language groups to do this and report back in Tiếng Việt.

In some situations where HMông language alone is not sufficiently effective in helping them to understand, teacher Phu said that using both HMông language and visual teaching aids such as pictures, images or artefacts relating to their everyday knowledge and practices, or giving hints, could prove effective.

In another example, teacher Anh reported that when she uses HMông language in the classroom, her HMông students are better able to understand pedagogical instructions and questions and complete tasks accurately.

I understand that many of my HMông students were quite marginalised in class when studying Tiếng Việt subjects. But now many of them have experienced improvement and are already well integrated into the class. I have found that my students became more excited when I used their mother tongue to teach them Tiếng Việt subjects. I believe that because I am using my students' mother tongue, they feel they are studying in a familiar and comfortable school environment; therefore, the children pay more attention, and are more engaged in the classroom activities (Teacher Anh).

Teacher Anh believed that her students' FoK, particularly their HMông language, to be a useful method to facilitate and attract HMông students to classroom activities and sustain their engagement. Teacher Phuong then described the way she used HMông language in her teaching practices:

In the story-telling section, I used HMông language to assist the HMông students' understanding. I combined the HMông with the Vietnamese to express some ideas, support conversations, and encourage them or to relate the HMông students' knowledge, culture, and other resources into their learning of Vietnamese (Teacher Anh).

However, Teacher Anh also admitted that studying HMông language to become a bilingual teacher proved quite difficult and challenging as she has different language and background knowledge from her HMông students.

The obvious effectiveness of learning HMông students' mother tongue gave Teacher Truong, the principal of the Trâu Piôr semi-boarding primary school, a reason to develop HMông language in his school. He recognised that bringing mother tongue into the lessons enabled teachers, especially Kinh primary teachers from different backgrounds, to become more familiar, friendlier and closer in their relationships with the children, leading to HMông students' enhanced engagement in study. Teacher Truong noted:

Learning the funds of language knowledge of HMông students is so beneficial because our ethnic students really feel excited, active, self-confident, and enthusiastic. The learning atmosphere in class becomes more comfortable when HMông students' mother tongue is employed in the classroom (School principal Truong).

In the third example, Teacher Huyen shared how she drew from HMông families' experiences and knowledge in daily activities, and how this method led to greater effectiveness during a maths session:

In lessons about units of weight, instead of using unfamiliar objects, I often link to their family's knowledge and experiences, for example with tea trees and tea production. Many of my students often help their family to sell tea leaves after school hours. I give them examples like 'if your dad picked and sold 15 kilograms of tea leaves and your mum who has more experience picked and sold 30 kilograms of tea leaves, and you sold 10 tea kilograms of leaves. How many kilos did each person sell on average? From this practical example, my students can answer my question (Teacher Huyen).

This situation shows how Teacher Huyen, one of just two Kinh teacher participants, knew how to refer to HMông parents' business experiences (tea production) and the children's own experiences in selling tea to address challenges while teaching mathematics to ethnic students. Using familiar contexts such as planting and selling tea was a useful teaching strategy of teacher Huyen to make academic knowledge in school more familiar, accessible, and less abstract to HMông students.

Similarly, Teacher Dao referred to her use of familiar things in the lives of HMông students to address abstract concepts and difficult content in maths:

When the students studied problem-solving lessons in maths, it became evident that most found this kind of lesson much more difficult to understand. The names of the words in textbook mathematics lessons such as 'wheat plants' did not encompass any personal HMông experiences or cultural knowledge. I realised that approaching the language issue by changing unfamiliar words improved their capabilities in studying maths. For example, I converted 'wheat plants' to 'cinnamon trees' or 'tea leaves', which are very familiar and common product in their families' activities. This was a good method to develop deeper understandings for HMông students (Teacher Dao).

In this example, Teacher Dao used familiar contexts in the daily life of HMông students and their family to solve word problems or lessons in maths in an effort to engage HMông students through allowing them to see their daily activities represented in maths.

Another maths teacher observed that invoking HMông students' daily life knowledge to replace abstract concepts or unfamiliar content induced higher levels of student engagement and task completion than the usual academic knowledge to be found in their textbooks. Teacher Phong confirmed that his students were 'more excited', 'more self-confident' and 'more become effective learners' when he referenced their culture, daily knowledge and practices in learning maths. Teacher Phong stated that:

I found my students engaged in the lessons more actively and there were more students who raised their hands and answered my questions...they were more engaged, more excited, remembered information more quickly and were definitely more focused in the classroom (Teacher Phong).

Wager (2012) said that the most common way teachers used to incorporate out-of-school knowledge in mathematics at school is using students' cultural and out-of-school experiences as a context for word problems. For instance, one teacher knew that some students are interested in soccer, so drew upon this interest to connect to a lesson using measurements of a soccer field. In the situation above, Teacher Dao knew to link familiar things in HMông students' households such as cinnamon trees or tea leaves to the school curriculum and use them as context to reduce the abstraction of concepts in academic knowledge and improve their participation in maths. McLaughlin and Calabrese Barton (2013, p. 26) also described FoK as a "hook" that teachers could use to make science subjects more familiar and less abstract "through sharing of personal experiences or prior knowledge around a particular phenomenon."

While interviewing Kinh teachers in the classroom, the researcher in this study noted significant amounts of cultural and intellectual knowledge and resources of HMông students had been introduced in the form of decorations. In particular, the classes featured designs and paintings of familiar images and symbols of the HMông community. In the rear corner of classrooms some local tools and artefacts were displayed on a shelf. The teachers explained these classroom decorations were intended to create a comfortable and welcoming school environment that was familiar with HMông students' culture and living environment.

In summary, evidence from teacher interviews highlighted the importance of using HMông students' FoK as a context for motivating student engagement, improving learning outcomes and establishing familiarity with school settings. Using HMông students' FoK for context is a beginning stage from which Kinh primary teachers leverage the powers of the HMông students' language and cultural resources to improve their learning. In the following section, the function of FoK extends beyond serving as a context to scaffold new knowledge and practices in the classroom.

6.2.2. Funds of knowledge as a scaffold in co-construction of academic knowledge

A second teaching strategy employed by Kinh teachers in the classroom was drawing on HMông students' FoK in meaning making and developing deeper understandings of academic knowledge. Compared to its first role, FoK now reaches beyond consideration of FoK as merely a context to connect to formal knowledge at school settings and viewing it as a crucial form of meaning making for many lessons and topics. Through Kinh primary teachers' responses, this section will discuss how and why HMông students' FoK are employed as a critical beginning platform for the co-construction of academic knowledge and deeper understanding in various subjects. The following examples of Kinh teachers' reported teaching practices that linked academic knowledge across school subjects to HMông students' FoK are summarised.

Teacher Oanh provided detailed examples by describing her HMông students' knowledge of the forest around their houses. The teacher decided to focus on forest matters that are important in their FoK, to create a classroom activity based on the topic of the forest. Experience with farming activities in the forest with their parents provides a foundation for learning about the roles of the forest. Teacher Oanh clarifies how HMông children and the teacher might co-construct HMông knowledge-based curricula and pedagogy. It was in Unit 30 - Agricultural Activities (Hoạt động nông nghiệp) in the subject Nature and Society (*Môn Tự nhiên xã hội*) for Year 3 students.

First, Teacher Oanh had her HMông students brainstorm what agricultural activities are important in their families and community. Next, Teacher Oanh selected the roles of the forest as the central point of the classroom discussion because she knew that the forest is considered an important everyday part of the livelihoods of HMông families. She believed that they had background knowledge and experiences about the forest because they depended on it for food, herbal medicine and wood in their daily life. During the lesson, HMông students acquired facts about the forest and its important role in their livelihoods in preventing natural disasters, floods and soil erosion. Teacher Oanh noted that the majority of her HMông students came to engage in a discussion about this topic.

In the second example, during ongoing efforts to understand the role of HMông students' knowledge in co-constructing lessons, in the Year 5 Agriculture in Geography unit (*Môn Địa lý*), Teacher Huyen described her HMông students' knowledge about growing rice in the terraced fields (a common farming method of the HMông on terraced terrain) for comparison with the rice growing methods of the Kinh group. Teacher Huyen shared:

My little HMông girls had background knowledge and skills about how to grow rice in the terraced fields. They began going to the fields with their parents when they were little children. Thus, they could build on this knowledge to learn more about other methods of growing rice used by other groups, like the Kinh. The children were extremely interested and self-confident in this topic and became active learners...They described the main preparation steps they had to take with their parents before growing rice (Teacher Huyen).

Although Teacher Huyen did not discuss how her students learned the way Kinh people grew rice, their existing knowledge of rice growing could possibly be enhanced through the implementation of certain rice growing skills practiced in their own community.

Below is an additional example that reiterates the role of students' FoK as foundational for HMông students' learning. In this case, Teacher Tam used traditional HMông knowledge of festivals as a scaffold to introduce a definition and features of festivals in other places in a story telling session. Teacher Tam noted that this method improved her students' achievement in the classroom.

This lesson was about a festival of the Kinh people living in the Red River delta. It was very difficult for the HMông children to understand what a festival was. Thus, to help them understand its definition and imagine the features of a festival, I required them to list their own traditional festivals and tell about those events...The children talked about their "Spring festival Suoi Giang" or "Oldest Tea Tree festival Suoi Giang"...then I helped them develop the definition of a festival and an awareness of the differences between festivals between HMông group and Kinh group (Teacher Tam).

Teacher Tam stated that using HMông cultural out-of-school knowledge as a scaffold in co-

construction of academic knowledge helped her HMông students easily understand, learn more and acquired academic knowledge from the lesson.

While many teachers using HMông students' FoK as the context for hooking HMông students' study, some teachers like Teacher Oanh, Teacher Huyen and Teacher Tam, as co-constructors of knowledge, moved beyond that to view HMông students' FoK (e.g. HMông students' cultural festivals, farming knowledge) as a supportive scaffold to engage HMông students in the co-construction of knowledge in order to extend school knowledge connections.

The example below revisits the theme of FoK as a scaffold in the co-construction of knowledge for HMông students' learning. In this case, however, deploying the everyday knowledge of HMông students is not strictly within the teachers' purview as it is also broadened by HMông students' contributions.

Teacher Nha described how seeing her students' embroidery patterns on their traditional costumes gave her the idea to collaborate with them to design an engaging cross-curricular unit on embroidery knowledge. Teacher Nha said:

I knew that HMông parents often taught their children to embroidery when they were young. I found they could embroider beautiful patterns such as sunflowers, geometrical designs on the surface of their clothes or skirts (Teacher Nha).

In this situation, Teacher Nha went beyond what she observed in her students to be a cultural practice. She tried to relate it to school knowledge by discussing areas in the Basic Techniques subject (*Môn Kỹ Thuật*) or the Art subject (*Môn Mỹ Thuật*) that might be needed while making embroidering. At this point, geometric knowledge relating the embroidery skills of HMông people might potentially be applicable in teaching geometry in to HMông students in mathematics lessons. However, the interviews of Kinh teachers revealed that none were using this knowledge for teaching mathematics to their HMông students.

In the excerpt below, a Kinh teacher named Huong reflected on her HMông students' knowledge of the forest and plants. Teacher Huong stated she was 'impressed' during a science lesson when the students shared their knowledge about different kinds of bamboo in the forest:

Surprisingly, my students showed me various plants and herbs growing in the forest and their benefits as well. Many of them I had not recognised before. For example, in the lesson about the “Tre, mây, song” (different kinds of bamboo tree) in our science subject, there were many kinds of bamboo trees I hadn't known, where my students are expert. These kinds of plants are very familiar and used in their daily lives. So, they shared much detailed information and knowledge about them with other students in the class (Teacher Huong).

In this way, Teacher Huong developed a clear understanding of the value of her students' FoK as experts that could be leveraged by both teacher and whole classroom. She reflected that her HMông students' knowledge of the forest and plant identification made the unit task more manageable. Teacher Huong stated that using their FoK was “useful” and “a good way” to stimulate the students' interest in knowing each other better, as well as extending teachers' knowledge. At this point, Kinh teachers change from the 'science expert authority figure' to “facilitator” in “a round table discussion” (Barton & Tan, 2009, p. 69) where teachers and students share valuable knowledge equally. Barton and Tan (2009) also noted that this function of FoK leads to teaching innovation, especially in science teaching and learning that changes “traditional approaches” to become “less top-down (teacher-to-students)”.

Teacher Huong in this example recognised her HMông students as whole persons with a broad a spectrum of knowledge, culture, and practices. In positioning HMông students and HMông people as experts in their daily life knowledge and practices, some Kinh teachers consider HMông students' FoK as offering educational potential as resources to extend academic knowledge by scaffolding their out-of-school knowledge in the classroom.

Educational documents in the research context showed that many Kinh teachers participated in programs and trained to design illustrated stories that were based on the daily life activities of HMông parents and children (Appendix 7). In those programs, teachers used their personal knowledge about the HMông culture and community and with the cooperation of HMông parents and grandparents composed various stories for children. These products were then used in classroom reading sessions. Teacher Luong said:

In the section practicing reading stories, without exception, HMông students were very interested and focused on the lesson. The stories about their daily community activities, histories, and culture seemed to attract them more than other stories used in class (Teacher Luong).

The problem is that although these documents emphasise using the language and culture of ethnic minority people as an effective strategy for minority students, they are not explicit about the employment of ethnic minority knowledge as academic knowledge in the teaching and learning process of formal education.

Future research may address how the utility of this FoK might come into play in the designing of specific curricula for HMông students, while at the same time keeping in mind the importance of shifting power differentials away from a teacher-centred pedagogy towards an authentic, student-generated model. This does not mean that the teacher is relegated to a minor role in the classroom. Instead, as this study shows, as students gain more agency within their learning space, and teachers become more like facilitators of students' self-recognition, students would be able to contribute more to their learning process, rather than be passive learners.

In this case, HMông students, along with their teacher, co-constructed the curriculum and documented their own experiences with the aim of promoting new knowledge. In this way, HMông students are incorporated in the teaching and learning process and recognised as capable of documenting their families and communities' FoK. There is wide agreement that HMông students' FoK was utilised to enhance their schooling experience by scaffolding their acquisition of new knowledge. Teacher Nha described a potential outcome of FoK by giving HMông students the "first building blocks as a base upon which they can build up and scaffold academic knowledge".

She emphasised the important role of FoK serving to co-construct formal knowledge in school settings.

To summarise, in the second stage cultural activities and experiences of HMông students and their families were first identified first and then school knowledge was matched to those activities and their out-of-school knowledge. This method differs from using HMông students' FoK as the context where the academic knowledge at school is identified first and then a context was integrated. HMông students' FoK are confirmed as a launch point from which deeper and more abstract understandings can be developed. In other words, the Kinh teachers initially knew how to create “*hybrid spaces*” (Baton & Tan, 2009) to scaffold academic learning by linking it to HMông students' FoK.

6.2.3. Funds of knowledge for enhancing teacher-student relationships

As a pedagogical tool, Kinh primary teachers used HMông students' FoK in exploration of the language and cultural knowledge of these students and their families, to lead them beyond deficit views of this ethnic minority group and improve relationships between the teachers/school with HMông parents and their children. There were various instances showing that Kinh teachers used HMông students' FoK to improve the teacher-student relationship.

In one example, Teacher Anh shared her experiences and feelings after visiting a HMông student's home:

I thought that she (HMông girl student) would be very lazy at home due to her low performance at school. I did not know that my little student had to do many household chores such as cooking, taking care siblings, farming in the fields with her parents, and picking tealeaves. Visiting students' households has helped me to explore their difficulties, psychological problems, and dreams (Teacher Anh).

Learning the personal profiles of HMông students and their families lead to empathy and deeper understanding. Teacher Anh started to envision her HMông student as a whole person, not merely a student.

In another example, Teacher Hoa, with 19 years teaching HMông students, said that her knowledge about HMông students helped her to break traditional barriers between them. Before ever making home visits, Teacher Hoa kept a personal distance and maintained a professional relationship with the students and their parents. She explained:

Through home visits, we shared their stories, difficulties in their lives. We talked about their culture, daily life activities, and their knowledge of business or production. Our conversations helped us understand each other as a person (Teacher Hoa).

Through her conversations with HMông parents, Teacher Chinh learned that her HMông students were very good at farming, taking care of their siblings and performing household chores, things she did not know before. In addition, she recognised that HMông parents were very “friendly”, “truthful”, “honest” and “have good behaviour in bringing up their children” (Teacher Chinh).

Teacher Luong, teaching in Year 1, also found that a cause of her HMông students’ school absenteeism was their travel transportation conditions. She seemed to be very empathetic with her HMông students, describing the way her students go to school:

My HMông students’ houses often were very isolated and three to four kilometres away from the school. The road was very difficult. They often walked on a narrow, muddy road; one side was a cliff and one side was a gorge, and they had to pass many streams. When I took home visits my students, I had to park my bike a few kilometres away from my student’s house and walk the rest of the way (Teacher Luong).

This finding is comparable with evidence from a study of Māori and Pasifika students in New Zealand schools that showed understanding their FoK could help teachers avoid reactive responses when students behaved inappropriately at school (Hogg, 2013).

Teacher Anh, Teacher Chinh, Teacher Luong and Teacher Hoa developed new insight into HMông students and their parents through close conversations during home visits. Dramatic changes in relationships between Kinh teachers and HMông students and their families were substantiated through many Kinh teachers' recognising and valuing HMông students' and their parents' FoK. These teachers discussed what they had learned from HMông students and parents and why it was paramount. They also reported that learning about the HMông students' FoK was of crucial importance in nurturing a sense of comfort and trust with the students and their different background and culture.

Most of these teachers confirmed that HMông students in turn, changed their behaviours and attitudes once their teachers began to recognise and value their FoK. In particular, the children started to develop greater trust in their Kinh teachers and began to seek their support for challenges at school and beyond. The classroom seemed to become a safe and friendly environment for these students. Teacher Tam stated, *"when my students have troubles in the classroom or even at home, they will come to me and share their stories."*

In this study, as Kinh teachers learned about HMông students' FoK, mutual trust and improved relationships between them developed. Kinh teachers place a high value on mutual relationships with HMông students and their parents, engaging with them inside and outside classroom. In turn, trust has become the key element to further facilitate the effectiveness of HMông parents' and children's engagement in the teaching and learning process. To marginalised minority HMông parents and their children, with their many limitations in schooling experience, trust in their teachers was an important condition precedent to bringing a FoK approach to the school environment.

These Kinh teachers believe that exploring HMông students' FoK affected how they perceived their students and dealt with them in the classroom. Understanding the strengths and difficulties of these children changed the teachers' views of their students' performance and lead to the creation

of pedagogical strategies for them. Developing deeper out-of-school knowledge of HMông students and learning about their FoK as a whole persons lead to greater effectiveness in many Kinh teachers' pedagogical practices.

Moll et al. (1992) suggested that the teacher-student relationship will lack substance if the teacher perceives students only as students and explores their knowledge in formal school settings. The findings of this current study suggest that teachers should be encouraged to develop other reliable ways to understand HMông students and their families, alongside traditional methods that occur in educational settings.

This section has described major ways in which Kinh primary teachers implemented incorporation of HMông students' FoK in their classrooms. The finding supports Hogg's (2011, p. 674) argument that drawing upon ethnic minority students' lived knowledge and experiences promotes a connection to school learning and avoids the "danger of experiencing school as unfamiliar, uncomfortable, and alienating."

The next section will offer evidence from Kinh teachers' counterparts who suspect that HMông students' FoK are not really beneficial to teaching school curricula and HMông students' learning.

6.3. SILENCE OF FUNDS OF KNOWLEDGE IN CLASSROOM PEDAGOGY

This section highlights some reported instances where Kinh teachers interviewed found using FoK was less productive or of no value compared to existing practices. Here, HMông students' everyday knowledge, experiences and practices were described as unsuitable for or incongruent with academic learning and school curricula. It also reveals the significant challenges for Kinh teachers working with HMông learners.

6.3.1. Conflict between HMông students' funds of knowledge and the school curriculum

Some Kinh teachers responded that the FoK approach appeared ineffective and unsupportive for teaching HMông students, as they viewed them as not having accumulated a sufficient variety of life experiences that could be employed in the classroom.

In the first example, the teachers said limitations of HMông students' FoK, especially the small children, were linked to their living environment and lifestyles. For example, Teacher Vinh said:

Most students do not know about cities. They do not have many opportunities to experience a city or city activities. This constrains them for learning concepts and academic knowledge involving this topic (Teacher Vinh).

Teacher Vinh found that disadvantaged HMông ethnic minority students who were born and living in remote and rural regions had limited exposure to and knowledge of urban life. In this case, HMông students' personal experiences seemed not to benefit their study.

In the second excerpt, there were a few Kinh teachers who noted that HMông students' FoK were unsuitable and incongruent with the academic content in many subjects, such as History and Geography. Teacher Tuyen said:

When my students started to discuss beaches and waves, most found this topic much more difficult to imagine and understand. My students have not ever seen the beach before, they have no personal experience and cultural knowledge associated with beaches, even from the TV. Thus, it sometimes challenges me to explain something using words that are not relevant to them (Teacher Tuyen).

Teacher Tuyen referred to geographic factors limiting their range of lived experiences. In this case, living in a mountainous province influenced the geographic landscapes to which students have personal exposure.

In the third excerpt, disagreeing that limitations of HMông students' FoK hinder applying a funds of knowledge approach in the classroom, Teacher Lan indicated that it is limitations in the

Vietnamese education system's national primary curriculum that challenge its application.

Teacher Lan, however, voicing similar reasoning to Teacher Vinh and Teacher Tuyen, explained that less support for the FoK approach exists because the national curriculum is simply not associated with HMông students' daily activities and their local context. Teacher Lan said:

Knowledge and experiences from HMông families, community, and peers are not used as a functional tool because they contradict or are incompatible with academic content in national curriculum (Teacher Lan).

The opinion of Teacher Lan confirms Luong Minh Phuong and Nieke (2013, p. 18) regarding a Vietnamese curriculum and content that challenges HMông students' learning, using phrases such as "one-size-fits-all curriculum" and "alien concepts", which underscores the inappropriacy of national curricula for Việt Nam's isolated HMông primary students.

Another excerpt below illustrates how Teacher Chinh responded regarding content her HMông students were taught in class that contradicted and was incongruent with their FoK.

I gave them [HMông students] the topic of roles of the forest in the grade 3 subject Nature and Society. The ideas provided by HMông parents' and their children's experiences were with regard to the forest and skills that their family had expertise in (Teacher Chinh).

Teacher Chinh had facilitated a collaborative planning session in a manner that was to stimulate ideas. Firstly, she recalled the HMông students' and their parents' FoK relating to the topic (e.g. the role of the forest). However, after discussion it became evident that the students did not have a grasp of the basic scientific knowledge or new concepts in textbooks about the forest' role in preventing natural disasters, floods, or soil erosion. The HMông students persisted with concepts relating the forest acquired in their daily lives from their living environment (e.g. providing wood, vegetable, herbal medicine). Teacher Chinh said the roles of the forest as suggested by the HMông children lacked relevance and ideas supporting the academic knowledge and scientific concepts in the curriculum and textbook, although it was relevant to them.

In the above example, Teacher Chinh seems to have overlooked (or dismissed) the knowledge and experiences grounded in the students' living context, instead rigidly sticking with academic concepts and knowledge in the textbooks and school curriculum. Language and curriculum policies appear to have impacts on Teacher Chinh' perspectives and her pedagogical practices when teaching her HMông students in class.

In another interview, Teacher Lan expressed that the school curriculum needed to become relevant to HMông children's cultures and daily practices when considering the students' desired learning outcomes. Teacher Lan recommended that to overcome this problem, the Vietnamese national curriculum and teachers' pedagogical methods needed to be more geared toward respecting HMông students' FoK.

As González et al. (2005) argued, the FoK approach includes strategies for making changes to pedagogical practices for the classroom. This means that teachers need to increase their efforts to work with the experiences and skills of their students and families to eliminate their [the teachers] "deficit mentalities" (González et al., 2005).

6.3.2. Discontinuity between HMông students' cultural frame of reference and academic knowledge

A small number of Kinh teachers interviewed expressed problems teaching HMông students due to their personal cultural frames of reference. Knowledge of HMông culture and phenomena in their lives was unfamiliar to the teachers, or even opposite to their own learned academic knowledge and concepts. These concerns presented major challenges in applying HMông FoK in their teaching curricula, especially in science.

Two evidentiary excerpts below illustrate where cultural knowledge inherited from parents, community and peers contradict or is incongruent with academic knowledge in the school environment.

In the first excerpt, Teacher Thai stated that HMông students often attend school with low standards of personal hygiene and sanitation related issues, such as washing hands or face, wiping noses, and dirt and mud on their clothing. Teacher Thai said:

My HMông students go to school every day in dirty clothes that they have not changed for many days. They don't even brush their teeth or wash their faces before going to school (Teacher Thai).

Teacher Thai explained that when he taught the students about maintaining personal hygiene, he found the knowledge and practices of HMông families to be very limited and they did not have significant FoK on this topic. When Teacher Thai began to teach them the main ideas about hygiene there were misconceptions and confusion among the students, so he had to start with the basics to address this issue. His response was to highlight hygiene for HMông children at school by planning activities before class for the students to practice, such as washing hands, brushing their hair and changing their muddy clothes. This meant providing additional support so that his teaching would be more productive. Teacher Thai shared:

Having the students practice hygiene skills instead of teaching them through academic lessons is more important and effective. I often ask them to clean their hands, feet, and faces at the school water tank before entering the classroom. Sometimes, I bring combs for their hair or help them cut their nails. In my class, I have an old carpet with many clean, old clothes for my students to change into when they are dirty or get wet on rainy days (Teacher Thai).

Teacher Thai also felt confused and complained that:

I have to waste a lot of time to help them improve their personal hygiene. Sometimes this task wastes part of my teaching time in class, especially on rainy days, when the HMông children arrive in wet and dirty cloths (Teacher Nam).

Here, Teacher Nam shared that although low personal hygiene of HMông students was not a barrier that cannot be overcome, it might hinder or decrease the effectiveness of his teaching and HMông students' learning.

Rheinländer et al. (2015) investigated the personal hygiene of ethnic minority children in selected kindergartens in the northern highlands of Việt Nam. Ethnic minority parents seemed to neglect teaching hygiene behaviours when raising their children. This study found that many teachers in these kindergartens expressed their disappointment and reluctance when they felt compelled to commit part of their time to teaching hygiene skills.

However, this researcher provided insight into the causes of poor personal hygiene of minority children involving their poverty and harsh living conditions. The living conditions, houses and infrastructure of minority people were described as generally very poor. Lack of water and basic sanitation infrastructure are significant barriers faced by highland communities in the country (Rheinländer et al., 2015). Moreover, this author explains that authorities have failed to invest resources to raise the standards of hygiene infrastructures and skills for ethnic minority communities in northern Việt Nam compared with those in the lowlands.

Thus, without being aware of such difficult living conditions, Kinh primary teachers could not engage HMông students' classroom participation and cognition and may be creating a gap in their relationship. While looking for ways to connect and develop relationships between teachers and students, Templeton (2013) suggested that teachers need to be aware of their actions before making judgments about their students who lack of hygiene in school due to their poverty. When teachers understand that some people's FoK may differ from others, the FoK concept can open up intellectual understanding.

The second example indicated how the different cultural knowledge, perspectives, and living practices of the HMông constrained Kinh teachers' use of their HMông students' FoK. Teacher Nhien shared:

HMông parents and children acknowledge that their illnesses are due to ghosts, thus they often worship ghosts instead of going to the hospital or seeing doctors when family members get sick (Teacher Nhien).

At times, Teacher Nhien appeared to view HMông cultural knowledge as embodying misconceptions that seemed to be strongly held and hard to deal with. Teacher Nhien said that misconceptions of HMông parents affect their children's study and school attendance. She described her confusion and the challenges she faced in dealing with the different misconceptions and deficit thinking of her students:

When I raised topics relating to advanced technology and health services in our science talks, sometimes I was confused about the accuracy of the ideas and knowledge that my HMông students bring into the classroom. HMông parents and their children believe in unsound cultures (hủ tục), and using shamans (thầy cúng) as a treatment at home, instead of advanced technology and medicine. I wonder to myself how I can correct their misconceptions or misunderstandings (Teacher Nhien).

The important point raised by Teacher Nhien is the question of how to address “dark FoK” (Zipin, 2009) in their schoolwork. However, what is called “dark FoK” may differ according to whether it is the HMông students' knowledge or the Kinh teachers' knowledge of the HMông people. More needs to be known about how HMông people understand their poverty, child labour, personal hygiene and use of shamans as a part of their health care services, and HMông children's dropping out of school. While the teachers feel empathy for the HMông students, they have not been provided the professional development to have the teaching capabilities to facilitate educational engagement with these “dark FoK” and use them to extend the students' academic studies. The teachers' negative attitude to the HMông dark FoK is that these are “out of date” or “sensitive” matters (Teacher Nhien, Teacher Thai). Thus, the teachers do not employ them in their teaching. If they deal with and try to apply this dark FoK they are concerned that they might do so in ways that do not enhance HMông students' knowledge about the conditions they face.

Zipin (2009) 's work focused on the negative experiences that shape knowledge and the ways that teachers might work with *dark FoK* of students in their classrooms. In this research, if a change is to be made to the life chances of these HMông students, then the teachers should be able to attend to the complexity of their students' lived experiences-those that enable as well as constrain. However, there appears to be no research literature to help Kinh teachers to address such challenges to educational work with ethnic minorities in Việt Nam.

A key point here is that the teachers appear to overlook certain cultural perspectives embedded in HMông students' daily life. HMông students' the cultural practices that related to hygiene, health and belief systems present as particularly challenging to these participant teachers and their teaching and have impacted the ways they are able to work with their learners. They do not seem sufficiently concerned with the important spiritual life of every HMông person. They hide this behind their own cultural perspectives in an attempt to adjust the knowledge, culture and language of their HMông students. Luong Minh Phuong (2015) contended that when teachers take an ethnocentric approach to manage cultural differences, students can become confused and hurt or feel inferior when their culture and living practices are denigrated and viewed as backward.

Jones et al. (2015, p. 541) have demonstrated that HMông children in northern Việt Nam are growing in up in "an isolated and insular culture". They prefer a cash economy, giving birth at home rather than in hospital, valuing shamans than rather physicians and hold formal education in low esteem due to its limited benefits to their daily practices (also see Turner, 2012a, 2012b). These researchers supposed these might restrict access by the HMông to wider Vietnamese culture and modernity. However, Michau (2012) argued that the HMông in Việt Nam "are being tactically selective about modernity" (p. 1854) to "keep HMông culture alive" (Ngo Thi Thanh Tam, 2010, p. 340), especially by drawing on clan-based relationships for socio-economic survival.

As Lee's (2019) research indicated, in the HMông diaspora in the US shamanism has remained strong and HMông cultural and ethnic identity has sustained itself internationally. Luong Minh Phuong (2015) explained that given the difficult situations in the lives of HMông people, the solidarity of their community and their collective identity are necessarily very strong. This might

explain the HMông students' high valuation of community activities such as traditional festivals, weddings, funerals or worship, leading to their irregular school attendance (Luong Minh Phuong, 2015). The current research emphasises that Kinh teachers need to investigate the historical and cultural practices of HMông students and their community, to be aware of how they perceive their cultural practices.

6.4. CONCLUSION

The evidence in this chapter has shown a connection between the process of Kinh teachers recognising HMông students' FoK as resources and the teachers' classroom responses. The current research has shown Kinh primary teachers' different strategies of teaching practices in applying HMông students' FoK.

Implementing HMông students' FoK in teaching curricula by Kinh primary teachers can be categorised in three ways. First, the most common way is that Kinh teachers use HMông students' out of school knowledge and experiences as a context to motivate their students to engage in the classroom and to reduce abstract concepts and content in textbooks and the curriculum. Second, at a higher lever, some Kinh primary teachers employ HMông students' FoK as scaffolding in the co-construction of academic knowledge. Third, Kinh teachers learn and use HMông students' FoK to build a close relationship and mutual trust between Kinh primary teachers, HMông parents and their children to support HMông students' study and facilitate the teachers' teaching practices in the class.

Although the Kinh teachers used HMông students' funds of knowledge as scaffolding to create academic knowledge, they did not go beyond their existing understanding. There were fewer Kinh teachers who used more interactive, dialogical pedagogies to create "hybrid spaces" teaching/learning experiences (Baton & Tan, 2009), or use more comprehensive methods for learning about HMông students' funds of knowledge.

The finding supports Hogg's (2011, p. 674) argument that:

Student FoK can usefully inform both what is taught and how. The first may be achieved by means of inclusive practice in terms of the contexts drawn on for teaching content and skills. The second involves supporting different ways of being in the classroom.

These three themes of teaching strategies that Kinh teachers recognise and account for in HMông students (Table 6.1), more fully illustrate the potential of pedagogical FoK for meaningful learning, management and support of their students' learning in school. That is, children's FoK are leveraged to foster various classroom activities, support their learning behaviours and improve the effectiveness of their academic learning and study outcomes. In addition, Kinh teachers leverage HMông students' FoK for its usefulness in their teaching and learning process. When these Kinh teachers engage with HMông children's FoK, culturally valuable conceptual knowledge such as Tiếng Việt, Geography, Mathematics and Science begins to develop and stimulate students to learn actively without resorting to didactic teaching methods.

The FoK theory as articulated in this thesis is positioned to develop teachers' ability to align with rather than replace one set of practices for another. Access to the language of dominant cultures is imperative for successful engagement in society but it must not come at the expense of the unique knowledge and cultural practices of non-dominant groups. It states that academic language and culture must remain a focus for learners if they are to take on and engage with mainstream societies and the expectations within.

However, evidence collected from a few teacher interviewees shows that, when compared to academic school curricula, differences in HMông cultural practices and knowledge are creating barriers to implementing HMông students' FoK in teaching curricula. These teachers view HMông students' FoK as knowledge that is unfamiliar, incongruent, or even in conflict with the school curricula. With such deficit views, they are likely to overlook HMông students' and their families' intellectual knowledge and have stated that applying the FoK approach to HMông students seems to be difficult and impractical.

Differing views about the applicability of the FoK approach to teaching HMông students in the Việt Nam context could be explained by various influencing factors. Chapter 7 will discuss the

sustainability of the FoK approach through comparing the potential benefits and difficulties in bringing HMông students' FoK into teaching curricula.

CHAPTER 7. DIFFICULTIES AND POSSIBILITIES FOR KINH TEACHERS USING HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN PRIMARY SCHOOL

7.1. INTRODUCTION

This chapter reports and analyses evidence in relation to the third contributory research question: what are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school? This question addresses the benefits, tensions, and dilemmas arising when Kinh primary teachers bring HMông students' FoK into the teaching of school curricula. Data gathered from in-depth interviews, documentation and field note data as explained in Chapter 4 are analysed throughout this chapter.

Key concepts in the FoK conceptual framework (Chapter 3) and the literature previously reviewed (Chapter 2) are employed to extend or compare with the knowledge presented in this chapter such as *mutual trust* (González & Moll, 2002; Llopart & Esteban-Guitart, 2018), *study group meetings* (Moll et al., 1992; Moll, 2014), *deficit thinking* (Chi, 2009) and *language barriers* (Lavoie, 2011; Rheinländer et al., 2015).

During analysis in this case study, key factors affecting Kinh primary teachers' uses of HMông students' FoK in teaching school curricula are identified. These influences are embedded in the HMông students' daily lives, school and Kinh teacher context, and educational policy circumstances. The themes that emerged from participant interviews are summarised in Table 7.1, below, and elaborated upon in the following sections.

Table 7.1: Educational difficulties and possibilities for Kinh teachers using HMông students' FoK

DIFFICULTIES
HMông student-related factors
1. Language differences
2. Lack of HMông parents' cooperation and engagement in their children study
Teacher-related factors
3. Teachers' cultural deficit thinking about HMông students and their parents
4. Lack of teacher resources, especially HMông teachers and experienced teachers
5. Teachers' low commitment to a FoK approach
School-related difficulties
6. Absences in national curricula and textbooks
7. Lack of official guidelines, references and professional education
8. Lack of school facilities and resources
POSSIBILITIES
1. Kinh teachers establish close relationships with HMông students and their parents
2. Unrealised potential of ethnic minority education policies

7.2. DIFFICULTIES OF APPLYING HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

In this section, eight key themes are identified as significant challenges that hinder implementing HMông students' FoK approach to teaching HMông students.

7.2.1. HMông student-related factors

Factors that bedevil the introduction of HMông students' FoK into teaching curricula are embedded in HMông students' daily lives, including (1) the language barrier and (2) HMông parents' low level of cooperation and engagement in their children's study and schooling.

7.2.1.1. *Language differences*

The language differences between HMông students and their Kinh teachers' instructional language (Tiếng Việt) are considered a significant problem hindering many Kinh teachers in the learning and employment of a FoK approach in HMông classrooms.

First, low levels of communication due to the language barrier between Kinh primary teachers and their HMông students and families hinder these teachers in exploring their students' FoK during home visits.

Kinh teachers interviewed explained that all HMông students use their mother tongue at home to communicate with family members as most HMông parents and grandparents do not know Tiếng Việt. As Luong Minh Phuong (2015) explained, HMông people often live exclusively in their own community so they lack opportunities to learn another language, such as Kinh. As a consequence, HMông students, their families, and Kinh primary teachers have to deal with interpersonal communication difficulties. Teacher Anh reported:

When I visited my HMông students' households, I found HMông students and their parents knew very little Vietnamese, while I did not know much HMông language. Thus, although I really wanted to explore their culture, knowledge, and practices, it was clear that home visits did not really assist me. I think the HMông language is the biggest barrier to me in exploring and applying my HMông students' FoK (Teacher Anh).

Teacher Anh expressed that the problem becomes even more pronounced when HMông children go to school and have to acquire academic knowledge from the curriculum in Tiếng Việt, and speak and comprehend their teachers' questions and instructional practices in Tiếng Việt as well.

Teacher Luong described how her HMông students often failed to understand her ideas during everyday classroom conversations:

I still remember when I taught Year 1 HMông students, they did not know any Vietnamese alphabet letters. I had to work very hard...as I did not know the local language...Sometimes, I had to use pictures and body language to make them understand the lessons. However, they were still very confused and there were many misunderstandings between us due to the language difference (Teacher Luong).

Teacher Luong admitted that the HMông students encountered many difficulties in understanding her instructions for classroom activities, particularly smaller HMông students in Year 1 and 2 due to language barriers.

To HMông students, learning in Tiếng Việt is a significant problem hindering their access to education, due to their second language limitations. At the same time, there are few Kinh primary teachers working with HMông students who have HMông language capabilities. Most of the Kinh teachers also admitted that their HMông language limitations were a major disadvantage when working with HMông students and their parents. Teacher Nhung teaching Year 5 HMông students confessed to having limited HMông language abilities:

Not knowing my students' language was a considerable disadvantage when working with both HMông students and their parents. I have six years of teaching experience with HMông students, but the only HMông words that I can say are only "hello" and "goodbye" (Teacher Nhung).

Language differences not only cause communication problems between HMông students and their Kinh teachers but this issue also fundamentally undermines the students' self-esteem and widens the gap between the Kinh teachers, HMông students and their parents. Teacher Huong, who has 15 years teaching experience with HMông students, shared that:

Due to their [HMông students] Vietnamese limitations, they often seem to feel shy, quiet, and too unconfident to answer my questions or give opinions. They often keep silent and keep a distance from me and other teachers, although I always try to create a friendly classroom environment and be nice to them (Teacher Huong).

While mutual trust and long-term relationships between teachers and students is seen as foundational for a FoK approach in the knowledge exchange between family and school (González et al., 2005; Saubich & Guitart, 2011), Kinh teachers appear to face challenges in creating trust, belief and close relationships with their HMông students. This might very well hinder Kinh primary teachers' ability to understand HMông students' FoK, which could continue to constrain exploring and implementing HMông students' FoK in the school environment.

7.2.1.2. Apparent lack of HMông parents' cooperation and engagement in children's study

Evidence from this study makes clear there is a lack of HMông parents' cooperation and engagement in classroom settings. Low level of engagement and connection by HMông parents to the school and their children was identified as a key factor affecting Kinh primary teachers' use of HMông students' FoK in teaching school curricula. Teacher Nhan teaching in Year 2-3 HMông students indicated that most of their parents simply left their children at school without accepting any responsibility or offering support, even for basics such as pens, pencils and notebooks. It should be noted here that in Việt Nam, parents are required to provide such school things for their children at the beginning of the school year. Teacher Nhan shared how she had to deal with this problem:

I found that the parents do not care much about their children's learning. Many students go to the school without anything throughout the whole school year. I have to use my own money or funds from some projects to buy pencils, notebooks and books for them. In my classroom, there are only a few children whose parents are concerned about their study (Teacher Nhan).

Another teacher complained that when her students failed to attend school for a few days, she

received responses from their parents such as: “*Let them stay at home if they do not like school.*” (Teacher Loan).

Teacher Hoa expressed that HMông parents seemed unaware of the value of education and their children’s schooling:

HMông parents do not think that they have any responsibility for their children’s schooling. They think it belongs to the teachers. For example, sometimes I call to ask parents to help their children review or recheck homework or what they studied in the classroom. However, there are few who cooperate with me. Most of them do not make any attempt or seem to ignore my suggestion. A few do not even answer my calls. They obviously think that teachers and the school have the responsibility for their children’s education (Teacher Hoa).

In the views of Teacher Nhan, Teacher Loan and Teacher Hoa, HMông parents lack a sense of responsibility and engagement in their children’s studies. They feel this issue poses a challenge to their employing HMông parents’ FoK in class and contributing to their teaching practices.

Findings from teacher interviews did not reveal reasons for HMông parents’ low responsibility and engagement in their children’s schooling. However, the research of Luong Minh Phuong (2015) into minority status of the HMông and its impact on HMông students’ low academic achievement suggested that “a sense of subordination” (p. 145) may result in an absence of the contributions and support from HMông parents and community. While the term of FoK refers to “historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and wellbeing” (Moll et al., 1992, p. 134), HMông people perceive themselves as having minority status, being “underdeveloped and socially marginalized” (Luong Minh Phuong, 2015, p. 146) compared to other ethnic minority groups in the country. Other reasons offered to explain HMông parents’ low cooperation and engagement in their children’s study include living in the disadvantaged conditions and poverty, and their history, settlement patterns and political relationship (Luong Minh Phuong, 2015).

In the research of Tran Ngoc Tien (2013, p. 130), an ethnic father said, “Never come here again. He (the student) does not want to go to school. It is useless. He does not want to study. Let him stay at home. We have a big farmland.” Such parents believed dropping out of school is a good choice for children, and using their time at home can bring in money, instead of paying out school fees and other school expenses (Tran Ngoc Tien, 2013).

Tran Ngoc Tien (2013) added that the parents lack belief in the value of education and goals of schooling. Most ethnic minority students and their parents assume the main purpose of education is to improve their income and stave off hunger. Unhappily, their valuations of education are not associated with the needs of daily life and therefore fail to meet their expectations (Tran Ngoc Tien, 2013). They lack a sense of belief in the value of education for their children’s future following graduation. As a result, ethnic minority parents lack confidence in education’s value and engagement in relation to their direct survival and more immediate economic outcomes. When parents living in poverty seem to be not fully aware of the value of education (UNIEF, 2013), they may have negative influences on their children’s study and their motivation for schooling (Trieu Quang & Jayakody, 2019).

However, when discussing the involvement of HMông parents in their children’s study and schooling, the school principal in Trâu Piôr semi-boarding primary school noted that:

The connection between the school and HMông parents is mainly related their children’s study outcomes, school behaviour, or financial issues. Sometimes we ask HMông parents to supply their labour to preserve or maintain facilities or infrastructure at the school.

We mostly have never invited them into classroom to observe or contribute their knowledge and experiences to teaching academic knowledge at school (School principal Thanh).

This excerpt shows that the school and the teachers do not provide HMông parents with opportunities or create a “hybrid space” (Baton & Tan, 2009) in which FoK of and dialogues with these parents could coalesce and expand school discourses’ boundaries. The evidence shows that

while parents are important agents in contributing their knowledge and implementing a FoK approach in school (González, Moll, & Amanti, 2005; Rodriguez, 2013), the connection, cooperation and engagement between school/Kinh teacher/ and HMông parents suggest a fragility that hinders its application. Tran Ngoc Tien (2013) stated that low engagement, supporting and communication between teachers/school and parents/community may be responsible for the low academic performance of ethnic minority students as well as poor teaching methods at school (Rheinländer et al., 2015) due to their educational aspirations and group identity.

In sum, in the implementation of the FoK approach, parents play an important role as an agent who own knowledge, strategic practices, and contemporary understandings (Rodriguez, 2013). Meanwhile, in HMông primary classes, HMông children lack their parents' contributions and incorporation into their learning. Kinh primary teachers and school do not seem to facilitate social relationships with and create a “hybrid space” for HMông parents and their community to access their FoK for educational purposes.

7.2.2. Teacher-related factors

Three themes emerged as significant challenges facing teachers as try to learn and employ the FoK approach to HMông students. These themes include: (1) teachers' cultural deficit thinking about the HMông minority group; (2) limitations of teacher resources, especially HMông teachers who have the language and cultural knowledge of HMông children, and (3) low commitment of many teachers to bringing the FoK approach into HMông classes.

7.2.2.1. Cultural deficit thinking about HMông students and their identities

Deficit views of HMông children that were prevalent in responses of Kinh primary teachers interviewed would likely be a significant barrier to a FoK approach.

There is evidence from teacher interviews that they seem to underestimate and ignore HMông students' culture and identities while teaching them. They assume that HMông students enter school with many disadvantages in learning ability and potential that cause them to underachieve. Nearly half of the Kinh teachers interviewed said that HMông students attend school with limited

knowledge from their living environment (Teacher Ly, Teacher Yen, Teacher Phu, Teacher Vinh, Teacher Tuyen, Teacher Thai, Teacher Nhlen, Teacher Nhung, Teacher Hien).

Stereotyping by these teachers is sometimes carried into the classroom, influencing their assumptions about the learning capacities of HMông children. One Kinh teacher said that she did not find anything that appeared to be useful or valuable in her HMông students' knowledge to support her teaching in class. During an interview lasting nearly one hour, this teacher often used negative words like "low", or "limited" to describe her HMông children's capabilities (Teacher Tuyen). It is an unfortunately unrecognised fact that HMông students need to study twice as hard as dominant Kinh group students because they have to use Tiếng Việt to understand their teachers' instructions and the academic knowledge in primary school curricula (Lavoie, 2011, Truong Huyen Chi, 2009; Huynh Thi Nhan Hieu, 2015). The negative attitudes of these Kinh teachers fly in the face of the original thinking behind the FoK approach, which is to explore, promote, and respect the strengths, experiences, daily-life knowledge, and skills of children and their parents for educational purposes (Moll et al., 1990; González et al., 2005).

Marginalisation through the deficit thinking and stereotyping of HMông students by Kinh teachers perpetuates perceptions of these children as passive receivers of knowledge, rather than contributors to its co-construction. When asked to offer reasons for this perspective of the characteristics and learning capacity of HMông students, teachers often use words such as "very quite", "low self-confidence", and "shy". They assume their natural existence in the HMông. Teacher Tuyen explained that:

Implementing HMông students' FoK approach requires the children to have critical thinking and become active learners in the classroom to take part in different activities to contribute to new knowledge. My HMông students seem to be challenged and most of them cannot do this (Teacher Tuyen).

Teacher Tuyen acknowledged that this method is based on students' strengths and personal knowledge from their daily lives and the children need to be given the latitude to access these attributes. She also observed that being "shy" and feeling "low esteem" constrained her HMông students from being "active learners" and hindering the implementation of a FoK approach in

teaching curricula. At this point, Teacher Tuyen seemed to impose her deficit thinking on her HMông students and their potential in applying the FoK approach to HMông students.

As a FoK approach requires promotion of HMông students' strengths, personal knowledge and everyday life interests and practices (Moll et al., 1992; Zipin, 2009), many of the Kinh teachers in this study fail to exploit these resources due to deficit thinking and negative attitudes toward the capabilities of these students and their parents and the community. Most Kinh teachers interviewed admitted that they had never invited HMông parents to visit their classroom, not to mention seeking their contribution to knowledge for their children's study. Due to the teachers' deficit thinking, HMông parents are considered part of a minority group of low socio-economic status and thus are not given opportunities to engage in school activities or their children's study.

Luong Minh Phuong (2015) has suggested that the image of HMông inferiority in the eyes of Kinh teachers might affect HMông children's study. Ignoring their cultural identities and underestimating the cultural differences and values of HMông students and their parents might render many Kinh teachers incapable of understanding their students' strengths and the multiple FoK resources embedded in their daily lives. This view also causes HMông students and their parents to perceive themselves as being more disadvantaged in their social lives and schooling settings (Luong Minh Phuong, 2015). This author went on to show that when HMông children grow up in such disadvantaged and poor living conditions and observe their parents' low positions compared to other ethnic groups, they tend to be less active and rarely present their own ideas, interests and strengths in classroom activities (Luong Minh Phuong, 2015).

7.2.2.2. Lack of teacher resources, especially HMông teachers and experienced teachers

Most interviewed participants admitted that a lack of Kinh teachers and particularly local teachers with the skills and HMông language capability to work with HMông students create many difficulties in developing a FoK approach.

School principal Thanh in Trâu Piôr semi-boarding primary school said:

In my school, there are only two teachers--one Kinh teacher and one local teacher-- who have the capability to teach HMông language to HMông students. Because of this lack of experienced teachers who know HMông language, especially HMông teachers, the number of HMông students who have opportunities to study HMông language as a subject in the school has been limited (School principal Thanh).

This school principal expressed the negative impact of a lack of Kinh and HMông teachers with HMông proficiency in providing more opportunities for HMông students to study HMông language at school. In addition, limited numbers of experienced teachers with the professional knowledge to work with HMông students prevent many Kinh teachers from exploring their students' knowledge and making adjustments and adaptations to their teaching curricula toward FoK approach. In fact, Kinh teacher participants in Trâu Piôr semi-boardng primary school and Khiz Zangx semi-boardng primary school mostly have distance Bachelor degrees that have been locally upgraded from their college degree. Many of them only availed a short course, such as 9+3.

7.2.2.3. Teachers' apparent low commitment to a funds of knowledge approach

Evidence demonstrates low levels of commitment among some Kinh primary teachers toward implementing HMông students' FoK, as they supposed that it was not or less productive for HMông students (also see Section 6.3).

These Kinh teachers admitted that they only used HMông students' FoK, including HMông language or cultural artefacts, for teaching purposes when local managers and school principals took part in and made assessments of their teaching practices. Other than that, on a regular day, they rarely applied this method. These teachers supposed that designing learning activities using HMông students' FoK would take a lot of time and effort (Teacher Vinh, Teacher Tuyen).

The second manifestation of teachers' low commitment to the FoK approach is its apparent silence in Kinh teachers' lesson plans. The lesson plans of the Kinh teachers interviewed mostly focused on academic knowledge and content in the textbook, without connecting useful knowledge of HMông students' and families' cultural and linguistic knowledge to facilitate their learning outcomes and accomplish the lesson's objectives. Two lesson plans of Teacher Anh and Teacher Hien interviewed about the units "Agricultural activities" (*Hoạt Động Nông Nghiệp*) in the subject Nature and Society for Year 3 students and "Socio-economic geography of Yên Bái province" (*Địa lý kinh tế xã hội tỉnh Yên Bái*) in the subject Geography (môn Địa Lý) for Year 5 HMông student are examples of absence HMông students' FoK in lesson plans (Appendix 6b). Though HMông students and their parents possess a depth of valuable knowledge in farming and agriculture within their environment (Lavoie, 2011; Luong Minh Phuong, 2015), these teachers did not deploy or even appear to recognise farming knowledge of HMông students and their parents as an educational resource for designing lesson plans and teaching curricula. In addition, teaching strategies designed in these two lesson plans indicated the teachers did not employ strategies of FoK approach. Their main teaching methods rigidly stuck with the academic knowledge in the textbooks and curriculum.

However, when interviewing these teachers, their responses showed that the FoK approach tends to occur incidentally while they were teaching. The researcher also received similar answers from other Kinh teachers. Evidence from interviews and documentation (lesson plans) showed that although the FoK approach was not an overt part of the planned teaching, it was nonetheless employed informally. The most common reason provided by many teacher interviewees was that except for the official textbooks, the teachers did not have any other documentation to guide and support them in applying HMông students' FoK to teaching curricula.

Others opined that lack of encouragement, support or detailed requirements from the local educational manager and school principals contributed to low motivation and commitment in valuing and implementing their students' FoK in their everyday teaching. However, the local educational manager interviewed had a different explanation for teachers' low commitment to the FoK approach:

Many teachers only use the traditional methods to teach their students and seem

to be afraid or not in favour of applying new methods or advanced technology to their students' learning. Specifically, some older teachers have low motivation to apply new teaching methods that focus on student-centred methods (Local Educational Manager Hang).

The problem here is that it was not possible to obtain sufficient evidence from local education managers. In part, this was due to the manager's limited knowledge of teachers' work in schools and in particular because of a deficit view of teachers, who were said not to be interested in new educational methods. The manager positioned the poor educational achievement of HMông students as simply a result of teachers' alleged inadequacies. This local educational manager supposed that low commitment to the FoK approach and other new teaching methods is because of teachers who lack the skills, qualifications and motivation to employ them in their teaching practices and school curricula. However, when interviewing the teachers it became evident that they were trying to be effective educators in quite difficult circumstances. Further, it should be noted that the manager was unwilling to discuss issues relating to the curriculum, funding, and education policy.

7.2.3. School-related difficulties

The potential for and sustainability of applying FoK appear to become more obstructive when disadvantaging factors exist at the macro level, including (1) national curricula and textbooks; (2) school references and guidelines for applying the FoK approach and (3) school facilities and other resources.

7.2.3.1. Absences in national curricula and textbooks

Applying HMông students' FoK in teaching curricula is confronting because of remote national curricula, and textbooks.

All interviewed teachers believed that the curriculum was cumbersome, overly academic and unsuitable for HMông primary students. They also noted that although some educational policies allowed them to adjust curricula and content to accommodate ethnic minority students and their context, the curricula were still not sufficiently suitable or relevant in terms of the HMông students' background, culture and knowledge (Teachers Mai, Teacher Lan, Teacher Hoa).

The curricula and textbooks of two school context settings for teaching HMông students showed some evidence of integrated content associated with their FoK. Notwithstanding this, the integrated knowledge is mostly general or not closely associated with HMông students' and their families' FoK. For example, in the total of 279 Year 5 Tiếng Việt subject units in Khiz Zangx semi-boardings primary school, there are but a few lessons containing concepts and knowledge that may provide the teachers with opportunities to associate with HMông students' language and cultural knowledge and experiences in their daily lives.

Kinh teachers interviewed admitted that HMông students were faced with unfamiliar concepts and content never previously experienced in their life environment (also see Section 6.3). In addition, many Kinh primary teachers agreed that images and situations in the primary textbooks were often irrelevant to the HMông students' lives or community.

Furthermore, although many Kinh teachers explored HMông children's FoK on their own time, opportunities for redesigning the curricula or changing their instructional practices to include students' FoK were sidelined. The lengths of each unit lesson contained time constraints as well, as interviews indicated that within the 40 minutes allocated they did not have sufficient time to adjust or employ their students' knowledge and skills in their teaching practices. Teacher Huyen teaching Year 1 HMông class said:

During the limited time for each lesson, I mainly focus on how to teach HMông students to read, write, and do calculations from 1-100. I think these tasks alone overload both HMông students and me. Thus, during a lesson, I cannot integrate HMông students' funds of knowledge or other methods. This would take longer and I am not allowed to extend the time

allocated officially for each lesson (Teacher Huyen).

Teacher Huyen hinted at the desirability of changing curricula to be better associated with the ethnic students' FoK but there was not have enough time available to design curricula to incorporate HMông students' unique requirements and characteristics. Many Kinh teachers said that in their instructional practices, they did not employ the "historically accumulated and culturally developed bodies of knowledge and skills" (Moll et al., 1992, p. 134) of HMông students and their families in their home environments.

In summary, remote school curricula, textbooks and time limitation in class cast doubt upon the potential and sustainability of the degree to which primary teachers currently combine HMông students' FoK in their classroom practices. Thomson and Hall (2008) reported that only children whose resources and knowledge match the educational content mandated at school can reap its benefits, while children who do not match this precondition remain disadvantaged in the classroom.

7.2.3.2. Lack of official guidelines, references and professional education relating to HMông funds of knowledge

The lack of opportunities to employ HMông students' FoK was investigated in two areas: (1) lack of official guidelines and referents; and (2) lack of professional training.

First, almost all Kinh primary teachers noted that there was no official endorsement or documentation enabling them to adjust or modify content or topics to make textbooks and curriculum content more closely associated with HMông students' daily lives.

The data shows that most Kinh primary teachers admitted to feeling unconfident implementing HMông students' FoK into their teaching process due to a lack of referents and official guidelines. Teacher Dao explained:

I did not feel confident or creative when planning lessons and designing various teaching and learning activities that were compatible with HMông children's knowledge and experiences in their home lives without supporting documents... I am a Kinh...I do not share their language and

cultural knowledge with them (Teacher Dao).

Teacher Dao revealed that without documentary support she was confused about her authority to change or redesign the content of textbooks or organise specific learning activities that were more relevant to HMông students' out-of-school knowledge. She said she was not sure whether her teaching methods were right or wrong.

Agreeing with Teacher Dao, Teacher Phong recognised that some content or concepts were not suitable for her HMông students but she could not make changes due to a lack of guidelines and detailed supporting documents:

In the reading group, I found some stories not suited to the living environment and culture of HMông students, but I cannot change the content of lessons without any teaching referents. I cannot guarantee the quality and accurateness of those lessons (Teacher Phong).

A few Kinh teachers independently redesigned the content of lessons to adapt to the reality of the students and their community. However, they expressed that the biggest difficulty was the absence of referents or documents to guide and support them in making these adjustments. When interviewing the school principals and the educational manager, they confirmed that there was a local document, which divided local knowledge into three subjects with various areas that included the history, culture, and ethnicity of Yên Bái province, but this material did not directly focus on ethnic minority students' FoK, especially HMông students' FoK. Others supposed that complicated official requirements for schooling rendered them unable to adjust textbooks and curricular content.

In the second category, most Kinh teachers asserted that they had only limited opportunities to attend professional workshops or meetings relating a FoK approach for their students. Even then, these workshops failed to wholly support them in the learning and application of this method. Thus, it is challenging to Kinh primary teachers to develop a deeper understanding and commitment to a FoK approach as a teaching philosophy.

All Kinh teachers interviewed said they had not attended any professional workshops in regard to exploring and implementing the language and intellectual knowledge of HMông students and their community. They also stated that other professional learning activities did not support them in implementing a FoK approach in HMông classes. As Teacher Hoa shared:

In our school, there were professional meetings every month where teachers discussed and shared experiences about their teaching practices. However, there were not any about the funds of knowledge method (Teach Hoa).

Teacher Hoa, having worked with HMông students for many years, admitted that lack of professional training, professional development and dialogue that focus on learning HMông students' cultural knowledge and resources hindered her in applying the FoK approach.

Some Kinh teachers noted that in recent years, those employed in highland regions have had opportunities to study their students' language through training courses in their locale. The teachers shared that these courses were completely voluntary and they had to pay a fee of around two million VND for the courses. They also claimed that the production of these language courses was not as they expected, due to language differences among various HMông groups in different areas. As the result, after a HMông language course, even if they could speak and write the HMông that was taught, they could still not apply it in their HMông classes and the HMông community in which they worked and lived.

This suggests a need for the provision of language policies at the national level that develop flexible multilingual programs based on local realities. Raising the awareness of educational decision-makers and educators regarding the role played by use of the learner's mother tongue should be paramount.

7.2.3.3. Lack of school facilities and resources

Applying HMông students' FoK in a research context leaves a want of support from the schools in terms of facilitators and other school resources.

The findings in this study illustrate that limited and poor school facilities and other school resources pose a formidable obstruction to effective learning activities for HMông students and constrain implementing a FoK approach in the classroom, particularly in subjects such as Science, History, Geography and Technology. Teacher Phong complained that:

Without the teaching resources, it was very difficult for me to provide educational tools (such as pictures, technology devices or Internet) that connect my students' interests, knowledge and life experiences with classroom activities (Teacher Phong).

In this example, Teacher Phong referred to how limited facilities in his school hinder the integration of his students' FoK to classroom settings.

One Social-Science teacher also shared:

I really wanted to organise field trip activities for my HMông students such as going to the fields or forest to carefully watch what their parents worked at and how they did it. Their knowledge of the forest and agriculture could be very useful for scaffolding their academic knowledge in many science lessons. However, my school did not provide enough facilities such as transportation and other resources to support me in this process (Teacher Oanh).

The problem is more serious for HMông students and teachers in satellite schools. While interviewing teacher Nhan working in a satellite school of Trâu Piôr semi-boarding primary school, the researcher learned that school infrastructure was inadequate, under construction with a small classroom made of bamboo, few windows, old and damaged desks and chairs, very dark and often flooded in the rainy season. Teachers reported that they did not have enough basic materials to support teaching and learning such as toys, crayon, or paper. Electricity shortages, lack of access to fresh water or sanitation in poor condition -- even no toilets -- are common situations in these satellite schools.

Lack of facilities and school resources hindered Kinh teachers and HMông students in designing

learning activities, and displaying students' work incorporating a FoK approach, and did not enhance students' motivation to learn and participate. As Teacher Lai shared:

The school principal encourages us [teachers and students) to decorate the classroom to make HMông students feel more familiar and comfortable in their educational environment. However, with a limited number of classrooms, small spaces and old construction, most teachers did not do this, with the exception of some classrooms in funded projects (Teacher Lai).

In summary, this section analyses evidence of the difficulties of applying HMông students' funds of knowledge in teaching curricula. First, the evidence indicates that there are HMông student-related factors, including language differences between their mother tongue and Kinh teachers' instructional language, and an apparent lack of HMông parents' cooperation and engagement in children's study. Second, teacher-related factors, including cultural deficit thinking about HMông students and their identities, hinder many Kinh teachers in recognising and using HMông students' FoK, lack of teacher resources, especially HMông teachers and experienced teachers, and teachers' low commitment to a funds of knowledge approach. Third, there are school-related difficulties involved in remote national curricula and textbooks to aid the teaching of HMông students, lack of official guidelines, references and professional education relating to HMông FoK, and lack of school facilities and resources to support the teachers teaching HMông students toward the FoK approach.

Such findings highlight multiple challenges that hinder Kinh primary teachers in implementing HMông students' FoK in classroom settings across all subjects. However, there are still glimmers of potential opportunities for its development and facilitation. Having analysed evidence of the educational difficulties faced by Kinh teachers in using HMông students' FoK in primary school, the next section will analyse evidence to explore the possibilities of the FoK approach in this context.

7.3. POSSIBILITIES OF USING HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

Advantageous factors that promote implementing HMông students' FoK in teaching curricula have

been investigated following two themes. They include (1) Kinh teachers' diligent efforts to create close relationships with HMông parents and their children and (2) unrealised potential of ethnic minority education policies. This section discusses these two key themes.

7.3.1. Teachers' establishing close relationships with HMông students and their families

As demonstrated in Section 3.3.4, the notion “confianza” (mutual trust) (González et al., 2005) between teachers and students/families is viewed as a key part of the FoK approach. Establishing a close and friendly relationship with HMông students and their parents in and outside of the classroom was confirmed by many Kinh teachers interviewed as a promising approach to enhance facilitating the FoK approach.

In their relationships with HMông students, most Kinh teachers shared that they consistently tried to create a close, warm and kind relationship to help the HMông children feel familiar, close, and safe. Teacher Lan described her good relationship with her HMông students:

I found there is no distance between us [the teacher and HMông students]. During the breaks, I devoted much time to my students to talk and ask them about their family, culture and other stories around their lives. They teach me how to do embroidery or I teach them to play games of the Kinh. To HMông students who live in the school, in the evening I often turn on the TV and choose videos talking about their culture and history that I know they are very excited about and keen on (Teach Lan).

Second, the good relationship between Kinh teachers and HMông students was also represented through teachers providing additional support to HMông students when they faced difficulties in their life. Teacher Huyen shared her strenuous efforts to encourage one HMông boy to return to school:

His house [HMông boy] was very far from the school, thus he was often absent due to transportation hardships between his house and the school. I decided to travel to this boy's house every morning to pick him up. For three months, we rode to school together on my motorbike. I remembered the rainy days, when we had to get off the motorbike and walk to school. I knew this job took a lot of time and effort but I felt happy helping my little student (Teacher Huyen).

Another sample is Teacher Hoa, a great supporter of HMông students, who stated:

I often help them [HMông students] to brush their hair, cut their nails, wash their hands and change their clothes. In my class, I have an old carpet with many clean, old clothes for my students to change into when they get dirty or wet on rainy days. For nearly 20 teaching years, my bag always had candy for my students' little siblings, in case my HMông children had to bring them to class (Teacher Hoa).

The school principal in Khiz Zangx semi-boarding primary school added this:

When HMông children get sick or do not go to school, teachers often visit their home directly to ask them the reason. They often collect warm clothes for the children to wear in the winter. When HMông parents have bad news in their families, teachers also visit them (School principal Thanh).

In addition, the good relationship between many Kinh teachers and HMông students is strengthened through the good heartedness of the teachers using their personal budget to buy books, notebooks or pencils poor HMông children in Year 1 and Year 2 at the beginning of the school year (Teacher Phuong, Teacher Huong, Teacher Hoa).

These Kinh teachers emphasised the importance of building close relationships with HMông students and their parents. In this way, they are able to demonstrate empathy with HMông parents and students, helping them feel comfortable when communicating with teachers and encouraging

the students to share their personal stories, knowledge of their daily activities and intellectual knowledge.

Teacher Chinh and Teacher Huong discussed their efforts to develop good relationships and mutual trust with HMông parents and their children. These teachers described their friendly connections:

HMông parents were very happy when I visited their homes. Sometimes, out of school time, I went to the fields to help them pick tealeaves on the weekend (Teacher Chuyen).

Although I have a workload at school and my own children to take care of, I still use my own time to visit HMông students' houses and learn about them. Sometimes, I also take part in their work activities such as picking tealeaves or going the fields with them. Engaging in their daily activities, we shared our business knowledge and developed deeper understandings about each other's culture as well (Teacher Chinh).

Teacher Huong noted that, if she saw anything during home visits relating to their culture and occupation, she asked HMông parents or their children if they could borrow it for the classroom to incorporate it as part of their academic knowledge. Teacher Huong impressed that she did home visits to her students' households without any conditions or financial support from the school.

These efforts by Kinh teachers indicate their recognition of the importance of creating close relationships with HMông students and their parents for educational purposes. In particular, this close relationship would nurture mutual trust between teachers, students, and parents -- central to the FoK approach.

7.3.2. Unrealised potential of ethnic minority education policies

There are promising signs that educational policies are having positive effects in bringing HMông students' language, culture and knowledge into the school environment.

The use of HMông language as a subject for HMông students in selected classes at both Trâu Piôr semi-boarding primary school and Khiz Zangx semi-boarding primary school was the first indication. The school principal in Khiz Zangx semi-boarding primary school said:

Every school year, my school has had two and three classes in which HMông students had chances to study the HMông subject. Both HMông students and their parents were happy and excited when their language was used as an academic subject in the school (School principal Thanh).

However, School principal Thanh also noted that the number of classes teaching HMông language was often limited due to the low number of teachers (Kinh teachers and local teachers) at the school with HMông capabilities. This hints at the need for an evaluation of teacher resources in terms of policies for disadvantaged ethnic schools.

The second potential policy is the use of local assistants (HMông people) in the classroom as a way to create a safe, familiar and comfortable school environment for HMông students, which has given rise to a new sense of HMông children as active learners. Student improvements in subjects using local assistants also suggests HMông students' improved their attendance and started to engage more in learning activities. Most interviewed Kinh teachers strongly agreed the children were more active in the classroom and took increased satisfaction from their learning successes. Teacher Huong expressed a good outcome, apparently from the local support provided:

Children used to sit there, get bored, and be quiet in the class. Now they are more engaged. They have started to ask the local assistant or me for help or ask questions. They were so happy and constructed their own comments with my support (Teacher Huong).

Teacher Truong, the principal of Trâu Piôr semi-boardng primary school reported that the HMông assistant helps Kinh teachers with teacher-student communication and supports the children to develop a deeper understanding of their lessons. Teacher Truong made clear the positive contributions to students' behaviour and study outcomes from the presence of a HMông assistant in the classroom. He shared:

Usually, the climate in a class supported by the assistant becomes more active than those without the assistant. HMông children feel safe and comfortable in the school environment with the instruction and support of the HMông assistant (School principal Truong).

Third, through a number of projects in many ethnic minority primary schools in Yên Bái province, the increased use of HMông language, local stories and other resources has provided persuasive evidence for developing a FoK approach. For example, under the Save Children project, in both Trâu Piôr semi-boardng primary school and Khiz Zangx semi-boardng primary school, many teachers, HMông parents and children had opportunities to take part in different activities to engage HMông language and local culture knowledge in the teaching and learning process.

Teacher Huong who was trained in the Save the Children course named “Teaching Tieng Viet as a second language” said:

Under the Save the Children project, I had many chances to take part in various activities such as designing visual tools for teaching and learning, teaching with the support of a local assistant and classroom observation to exchanging experiences and practices with teachers from different schools. I found such activities were very useful for my work and very effective with ethnic minority students. Through those in-service training courses, I had many experiences and gained a lot of knowledge about teaching my students, especially relating to HMông language and culture to support my teaching and learning activities (Teacher Huong).

The school principal of Trâu Piôr semi-boardng primary school reported that HMông parents who

were invited to the project were willing to coordinate with teachers to compose various stories for children to tell during reading time, provide local products or make visual study tools associated with their cultural performances, to display in the classroom or the library. It seems likely that when the school provides HMông parents with opportunities and a “hybrid space”, they would demonstrate engagement in their children’s study and school activities. Such a transformation generates a range of pedagogical implications, including the ways textbooks and other resources can provide equitable support for all learners. These educational policies demonstrate an initial understanding of using the FoK framework and its potentials to fit the focus of this study.

Kinh primary teachers who were chosen to participate in the funded projects were given increased opportunities for professional development, going on field trips to other schools and other provinces to study or share their knowledge and ideas with other teachers and professionals. As a result, they become more active, flexible, adaptive, and less passive in their teaching practices with their minority students. They knew how to employ teaching and learning strategies that were better suited to their HMông students, their culture, and their characteristics. As explained in Section 6.1, these Kinh primary teachers are some of the few who developed a deeper understanding of the FoK approach and began to apply it as a teaching philosophy.

7.4. CONCLUSION

This chapter has provided data revealing difficulties and potentials that arose when Kinh primary teachers working with HMông students initially employed the FoK approach.

Evidence from this chapter has shown that the difficulties in learning and implementing a FoK approach in HMông student classes seem to outweigh the benefits. With the complex political, cultural and socio-economic history of Việt Nam as a backdrop, Kinh teachers face a variety of factors that hinder implementing a FoK approach for HMông students. There are the issues the teachers themselves related, such as cultural deficit thinking, teacher resources and teacher commitment, as well as other issues related HMông students, their families and school that hinder exploring and applying a FoK approach. While teacher-related factors might be manageable, other aspects in the mainstream school curricula, textbooks and HMông-related factors seem to be more complicated and difficult to overcome.

However, there are some promising signs, such as conscientious efforts being made to nurture close relationships between Kinh primary teachers/HMông parents/children and educational policies regarding HMông minority students. These can deservedly be viewed as positive influences backing Kinh primary teachers' efforts to bring HMông students' FoK into teaching curricula. The following chapter will further discuss the themes and issues emerging from the findings presented in Chapters 5, 6 and 7.

CHAPTER 8. CONTRIBUTIONS TO KNOWLEDGE RELATING TO THE EDUCATION OF TEACHERS OF HÔNG STUDENTS

8.1. INTRODUCTION

This chapter sets out the findings for each of the research questions, accompanied by expositions of the evidentiary basis for each of the findings. These have also been critically discussed in the literature reviewed in Chapter 2 and the conceptual framework outlined in Chapter 3. Together, a basis is provided for establishing the originality of this contribution to knowledge, specifically in the area of Kinh primary teachers' curriculum uses of Hông students' FoK in primary schools in northern Việt Nam.

The goal of this study has been to explore Kinh primary teachers' curriculum uses of Hông students' FoK. In doing so, this study has addressed Hông students' FoK in the teaching practices of Kinh teachers working and living with Hông students. Additionally, it has aimed to clarify the existing barriers to and potentials for the application of a FoK approach to the national curricula for these students. This study has relied on in-depth interviews with 26 Kinh primary teachers, two school principals and one local educational manager to explore Kinh primary teachers' uses of Hông students' FoK in the teaching and learning process. The analysis of data was guided by the theoretical framework described in Chapter 3.

In this chapter, key findings are set out for the research questions, each accompanied by exposition of the relevant evidence and discussed critically in the context of FoK literature reviewed for this study (Section 8.2). In Section 8.3, a thesis statement is presented. Section 8.4 presents the implications based on the study's findings for developing policies and teaching practices for Hông and other ethnic minority students. Finally, the limitations of recommendations for future research are discussed (Section 8.5).

8.2. FINDINGS

At its core, this project explored Kinh primary teachers' applications of HMông students' FoK to teaching curricula. This study did not focus on any particular content area of students' FoK or subjects in the primary curriculum, rather it examined what counts as learning and using HMông minority students' FoK by Kinh primary teachers in relation to their teaching practices.

Implementing HMông students' FoK can be seen as an extremely complex concept that involves multiple factors and influences relating to differing HMông families and communities, school environments, policies and other systems and networks. These factors affect Kinh teachers' learning and implementing HMông students' FoK in teaching curricula.

This study set out to answer three contributory research questions:

1. What sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula?
2. How do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices?
3. What are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school?

8.2.1. Kinh primary teachers' identification of HMông students' funds of identity as an educational resource

This study's first contributory research question was: what sources of HMông students' FoK, if any, do Kinh teachers identify in their practices across primary school curricula?

This first research question delves into conversations with Kinh teachers about recognising and legitimising ethnic minority HMông students' sources of FoK.

The first finding is that HMông students' FoK that was explored and used by Kinh primary teachers in teaching curricula are likely to support the *funds of identity* concept (Saubich & Guitart, 2011), rather than the *funds of knowledge* concept (Moll et al., 1990, González et al., 2005). From the Chapter 5 analysis of Kinh teachers' interviews, Kinh teachers explored multiple sources of HMông students' FoK that can be categorised into different themes, as shown in Table 8.1.

Table 8.1: Comparison of household funds of knowledge (Moll et al., 1992) and the HMông students' funds of knowledge

HMÔNG CHILDREN'S FUNDS OF KNOWLEDGE		SAMPLE OF HOUSEHOLD FUNDS OF KNOWLEDGE	
Family-based funds of knowledge	Parents' job <ul style="list-style-type: none"> • Farming • Picking tea leaves • Crop planting (tea) • Animal management • Feeding animals (cattle, buffalo) • Using labour tools (ploughs, picks) • Shucking corn • Taking care of children Parents' language <ul style="list-style-type: none"> • HMông language Parents' cultural artefacts <ul style="list-style-type: none"> • Musical instruments, • Folk stories • HMông poems 	Agriculture and Mining <ul style="list-style-type: none"> • Ranching and farming • Horse riding skills • Animal management Soil and irrigation systems • Crop planting • Hunting, tracking, dressing Mining <ul style="list-style-type: none"> • Timbering • Minerals • Blasting Equipment operation and maintenance	Material & Scientific Knowledge <ul style="list-style-type: none"> • Construction • Carpentry Roofing • Masonry • Painting • Design and architecture • Repair • Airplane • Automobile • Tractor • House maintenance
Community-based funds of knowledge	Cultural events	Economics - Business <ul style="list-style-type: none"> • Market values • Appraising • Renting and selling • Loans • Labor laws • Building codes • Consumer knowledge • Accounting • Sales 	Medicine <ul style="list-style-type: none"> • Contemporary medicine • Drugs • First aid procedures • Anatomy • Midwifery Folk medicine <ul style="list-style-type: none"> • Herbal knowledge • Folk cures
Students' own funds of knowledge	Bilingualism Embroidery	Household Management <ul style="list-style-type: none"> • Budgets • Childcare • Cooking • Appliance repairs 	Religion <ul style="list-style-type: none"> • Catechism • Baptisms • Bible studies • Moral knowledge • And ethics

Depending on their different teaching purposes, each Kinh teacher interviewed recognised and used (1) family-based funds of knowledge such as HMông parents' occupations, HMông language and HMông families' cultural artefacts (first theme), (2) community-based funds of knowledge embedded in cultural events (second theme) and/or (3) HMông students' own funds of knowledge such as bilingualism and embroidery knowledge (third theme). This finding parallels Saubich and Guitart's (2011, p. 98) study, namely that HMông students' *funds of identity* provide teachers with "tangible, historical cultural factors such as social institutions, artefacts and cultural beliefs" that they can affirm in the classroom.

This finding seems to contradict previous results from Moll et al. (1992) who used the term *funds of knowledge* to refer to "historically accumulated and culturally-developed bodies of knowledge and skills essential for household or individual functioning and well-being" (p. 134). More specifically, Moll and his colleagues (1992; also see Moll et al., 1990) argued that household FoK connected to information about matters such as trade, business, and finance or knowledge about exchanging resources through social networks to enhance households' ability to survive. Moll et al. (1992, p. 139) argued that:

Our concept of funds of knowledge is innovative, we believe, in its special relevance to teaching, and contrasts with the more general term "culture," or with the concept of a "culture-sensitive curriculum," and with the latter's reliance on folkloric displays, such as storytelling, arts, crafts, and dance performance.

While teaching HMông students, it is likely that Kinh teachers concentrate less on the economic knowledge of HMông parents and favour anthropological concepts such as culture, and folkloric displays such as storytelling, arts, embroidery and language. In other words, this study found that the Kinh teachers tended to emphasise HMông students' and their parents' *funds of identity*, a feature that seems to fall outside Moll's (1992) FoK framework.

In the current study, there were only two Kinh teachers who used economic aspects of HMông parents (selling tea leaves) to replace unfamiliar words in problem-solving mathematics lessons. However, they did not go further to ask their students to think about these economic implications of learning mathematics. Thus, the HMông parents' economic FoK were likely to be absent from the Kinh primary teachers teaching/learning practices.

Turner (2012a, p. 549) explained that HMông economic production “is based on human need rather than profit, with the concepts of well-being [seen as central].” This researcher further stated that the economic production of HMông farmers is reflected in “semi-subsistence terms rather than a shift to capitalist, market-oriented or ‘modernist’ consumer requisites” (Turner, 2012a, p. 549). It is likely that HMông economic self-sufficiency actually points to them not being integrated into a capitalist economy. In contrast, Moll et al. (1992) approach has an economic capitalist focus wherein the HMông are seen as “deficient”. This finding lends further credence to Luong Minh Phuong's (2015, p. 149) argument that:

The strong sense of collective identity of the HMông is shown in their unity of language, customs and rituals among six HMông groups ... Although the HMông groups are sparsely settled across different countries and suffered from great pressure for assimilation to the host cultures, they still preserved their linguistic and cultural heritage ... The unity of language possibly underlay the cultural heritage of the HMông throughout the world. Another remarkable unity was shown in customs and rituals and festivals.

This study also found that the identity of HMông people embedded in their language, customs, artefacts and other intellectual resources provided a focus for Kinh teachers efforts to connect with their students. The teachers in this study considered these elements of HMông funds of identity as educational resources, as they explained their work with HMông students to improve their study outcomes and school behaviour. Nevertheless, knowledgeable teachers can use *funds of identity* to energise the *funds of knowledge*, especially when students' families use *funds of identity* features to define themselves (Esteban-Guitart, 2011; Esteban-Guitart & Bastiani, 2011; Esteban & Ratner, 2011; Esteban-Guitart & Moll, 2014a).

The combination of FoK, funds of identity and dark FoK are suitable for the focus of this study as it affords a more accurate account of the lives of the participants. Particularly useful is Zipin's work focused on the negative experiences that shape knowledge and the ways that teachers might work with these aspects of learners in their classrooms. If a change is to be made to the life opportunities of these students, then teachers must be able to attend to the complexity of their lived experiences, both enabling and those that constraining. The FoK theoretical framework of this thesis is well placed to support participating teachers working with children of HMông heritage. The sociocultural framework embeds the research in the concepts that nothing comes from nowhere and no one comes with nothing, and the specific focus on HMông knowledge pinpoints the focus directly on improving the educational experiences of this group of learners.

In short, the *funds of knowledge* notion, which is geared toward knowledge about household functioning, development and well-being, provides a critical path to assess the diverse FoK sources of HMông children that are embedded in their families, communities and cultures. A major finding from this study is that Kinh primary teachers explore and value different sources of HMông *funds of identity*. They engage HMông students' language, customs, artefacts and other cultural resources that are stimulated and constructed through their everyday life experiences. Furthermore, these sources of HMông students' *funds of identity* were recognised and highlighted by Kinh primary teachers through a variety of pedagogies, that they deployed in order to engage the children in their classrooms. Kinh primary teachers created opportunities to explore and value HMông children's *funds of identity* in family homes during home visits, and during cultural celebrations in the community and primary schools.

8.2.2. Recognition and acknowledgement of HMông students' funds of knowledge in Kinh primary teachers' teaching practices

The second research question enters the conversation in regard to legitimising and applying HMông ethnic minority students' FoK for their teaching practices. This section addresses the second contributory research question: how do Kinh primary teachers use HMông students' FoK as part of their teaching/learning practices?

The key finding to this research question is that Kinh teachers are responding to and accounting for HMông students' FoK in national primary curricula in different ways, and to varying degrees through their pedagogical methods. However, a common method that Kinh teachers resorted to was using HMông students' FoK as a context to make a link to academic knowledge at school.

Using FoK as a context was metaphorically described in the theoretical framework of Turner et al. (2012) in regard to how teachers make connections with children's multiple forms of mathematical knowledge in their instructional planning. Turner et al. (2012, p. 77) referred to an "*emergent connections*" concept to create links "either to students' home or community knowledge or to children's mathematical thinking, that are superficial in nature ... adapt textbook mathematics lessons by changing the names and/or contexts of word problems to reflect familiar cultural referents".

Turner et al. (2012) advocate deeper levels of connection they call "*meaningful connections*". These researchers argue that teachers can make "*meaningful connections*" when they understand how their students' various applications of mathematical thinking and knowledge in their homes and communities might work together to support learning and the designing of mathematically rich problem-solving experiences in the curriculum.

The current study has found that most Kinh primary teachers interviewed, such as Teacher Phu, Teacher Huyen, Teacher Dao (Section 6.2.1), have only just begun to make "*emergent connections*", and have yet to progress to "*meaningful connections*". These teachers change words in textbook problems from, for example, *lúa mì* (wheat) (which is not grown in their place) to *cây quế* (cinnamon trees) or *cây chè* (tea trees) (because these local agricultural products). However, they do not yet elicit HMông students' experiential knowledge related to tea or cinnamon production. Aguirre et al. (2013, p. 184)) argued that "*emergent connections*" are just like "traditional school-based tasks" that entail "low cognitive demand" and reflect limited attention to FoK, or none at all. Fewer Kinh primary teachers in this study recognised and employed a higher degree of connection through using FoK to scaffold the co-construction of academic knowledge to advance students' learning.

Specific to the current study, Kinh teachers admitted that the use of the FoK approach was likely to occur incidentally while they were teaching. As verification, the curriculum documents provided by the Kinh teachers showed the *meaningful connections* necessary for the FoK approach was unaccounted for in their lesson plans. If teachers were more knowledgeable about FoK, teachers might explore more *meaningful connections* regarding HMông parents and their children.

Cooper (2016) provided a useful example of what such professional learning might entail, suggesting the exploration of knowledge, practices and skills of ethnic minority students as a way to strengthen teachers' professional framework for investigating what kinds of FoK could be used to make *meaningful connections* to academic learning. However, Cooper (2016) did not answer the question regarding how academic knowledge in school settings might be adapted through teachers' pedagogical practices so as to integrate students' FoK into their classroom learning. Another example was provided by González et al. (2001, p.116) in terms of bringing FoK to teaching maths, where they stated "classroom learning can be greatly enhanced when teachers learn more about their students and about their students' households." However, the manner in which these students' learning is enhanced by doing so and the nature of the enhancement is not clear.

The Kinh primary teachers' acknowledgement and responses suggest recognition of a need for different pedagogical approaches to work with their HMông students and their FoK. Previous reviews of FoK limitations that focussed on how and through which pedagogical methods FoK can be employed in classroom settings have received inadequate attention (Rodriguez, 2013). A majority of FoK studies reviewed in Chapter 3 (Section 3.3.1) identified various sources of FoK, but insights into the pedagogical and epistemological practices seemed to be less common among FoK scholars than the selection of the content and design of potential lessons using students' FoK. This study contributes to knowledge about the need for these practices and suggests possible ways to improve Kinh primary teachers' pedagogical methods for working with HMông students.

By understanding FoK pedagogies necessary for making *meaningful connections*, Kinh teachers are likely to be able to find new ways to intellectually engage HMông students' learning at school, by creating various connections to their out-of-school knowledge and practices and extending the different levels of complexity required to advance their learning. These distinctions may help Kinh teachers develop specific ways to redirect their educational focus. Wager (2012) found that when teachers of mathematics are unfamiliar with students' life context their use of FoK is diminished, but those who are capable of using students' out-of-school knowledge as a context for mathematics education minimise the complexities of teaching/learning practices and save time. Providing Kinh primary teachers deeper understandings of FoK and exploring their differing attitudes to this approach might create a basis for addressing limiting or challenging factors they face in making higher, more "*meaningful connections*". The next section discusses the difficulties and potentials of bringing HMông students' FoK into teaching curricula.

8.2.3. Educational potential and difficulties in using HMông students' funds of knowledge in primary school curricula

The third contributory research question is: what are the educational difficulties and possibilities for Kinh teachers using HMông students' FoK in primary school?

The key finding in response is that the difficulties of using HMông students' FoK in primary school curricula overwhelm the educational potential.

This study found that Kinh teachers do indeed work with a variety of HMông students' family FoK but nonetheless face difficulties while trying to make strong educational connections with HMông students' FoK. Themes emerging from the interviews that connect with the literature include: (1) language barriers; (2) HMông parents' low cooperation and engagement in supporting their children's learning; (3) cultural deficit thinking, with low commitment among Kinh primary teachers to the FoK approach.

However, it is argued that difficulties arise because of issues beyond the control of the teachers. They are: (4) limitations of national curricula and textbooks and (5) insufficient teacher resources and opportunities for professional training programs. These factors impinge negatively on any potential for introducing and sustaining a FoK approach in schools serving HMông students and their communities.

Rodriguez (2013, p. 95) provided three main themes for application of the FoK to classroom teaching, including:

- (1) engaging students in the co-construction of knowledge to deepen or extend academic knowledge through FoK;
- (2) recognising and encouraging the utilization within the classroom of multiple FoK among students, including home/family FoK as well as youth and popular culture FoK; and
- (3) moving beyond solely the connection between student/family/community.

However, looking back the data analysed, although many Kinh teachers initially recognised and preferred to use “multiple FoK among students”(2), they have faced challenges when trying to engage HMông students in the “co-construction of knowledge”(1) and go beyond ‘the connection between student/family/community’(3) to develop classroom transformation (Rodriguez, 2013), due to the limitations of school curricula and textbooks.

The national curriculum and textbooks in the Vietnamese education system are structured and organized in a top-down manner (Huynh Thi Nhan Hieu, 2015). Teachers seem to comply with the strategies outlined and directions provided, in the absence of any educational philosophy for scaffolding these strategies. Conversely, the FoK approach requires teachers to engage a philosophy requiring them to respect and recognise the multiple FoK of HMông children and incorporate them into teaching curricula.

Therefore, it is highly probable -- even most likely -- that national curricular policies and textbooks in the Việt Nam context fail to create learning spaces or “*hybrid spaces*” (Baton & Tan, 2009) for HMông minority students and their parents in which both teachers, students and parents can have opportunities to tap into a FoK approach and use FoK in the teaching and learning process.

Literature regarding ethnic minority education shows that HMông students are less fortunate compared with Kinh children, due to MOET's national educational policy requiring students nationwide to use and apply the same curricula and textbooks. In addition, only 15% of curricula and textbooks are customized to meet local needs, but this has not been well documented (World Bank & MOET, 2009). Hence, in the context of this research, the Kinh primary teachers are challenged in exploring and applying the FoK approach in the absence of opportunities in their teaching curricula to tap into HMông language and cultural knowledge and other intellectual resources.

Hogg (2013)'s research showed teachers also struggle to integrate Māori and Pasifika students' FoK with classroom teaching practices. These challenges facing teachers were related to (1) students' modest and shy characteristics, which hide their strengths and resources from teachers; (2) trust between teachers and students; (3) parents' participation; (4) time constraints; (5) school funding and (6) a "different pair of glasses" (p. 86) through which teachers seek to identify their students' FoK. Hogg (2013) suggested that parental participation plays an important role as a source of information to support Māori and Pasifika students in collaboration with their teachers about FoK.

In another example, having researched local FoK in ethnic minority education settings in Gia Lai, Việt Nam, Hedges et al. (2016) surmised that differences in the cultural knowledge of teachers and their deficit views of ethnic minority families created tensions in and barriers to their relationships with ethnic minority parents and student learning.

However, this research suggests that the concerns expressed are perhaps not the most significant issues at stake here. Instead of focusing on the shortcomings of teachers or parents, the main concerns that warrant deliberation are those relating to the curricula, textbooks and school resources, which are likely beyond the capacity of teachers to appropriately address. Investigation of this issue might afford persuasive evidence for establishing better policies for HMông primary students in terms of school curricula and textbooks.

The second key finding regarding the third contributory research question is that Kinh teachers visit HMông families and make pedagogical use of HMông students' FoK in the classroom, but do not receive the training in ethnography and study groups (González et al., 2005) necessary to further their professional learning and teaching practices.

The data analysed show that while Kinh teachers do home visits, there are limitations to their purpose and function. Not all these teachers have opportunities to participate in ethnography training before paying visits to HMông students' homes. In addition, their pedagogical use of students' FoK is but an incidental practice, not part of a pedagogy informed by in-depth practical knowledge.

One of three elements of the FoK approach is "study group meetings" (Moll et al., 1992; González et al., 2005; Moll, 2014). The study group is considered a "mediating structure" (Moll, 2014, p. 123) that includes teachers and researchers who work together to discuss theory, data collection and findings, and to develop classroom strategies to connect students' FoK and the school environment.

At this point, Kinh primary teachers bear sole responsibility for data collection relating to HMông children and their families after home visits. The teachers do not have opportunities for involvement in study group meetings involving the support of researchers and local authority coordinators, where they can work together to scaffold the everyday knowledge of HMông students to facilitate academic knowledge in school curricula. In other words, in this research context, there is a lack of teacher-researcher collaboration in conducting HMông household research and in using their knowledge to develop appropriate classroom practices. This might explain why many Kinh teachers seem confused and uncertain of the appropriacy of practices that apply the FoK approach in their teaching and learning processes.

Hill (2010, p. 336) claimed "partnerships between academics and teacher researchers can be rigorous, systematic and generate new knowledge as each partner negotiates and creatively engages with 'theoretical' and 'practical' knowledge." In other words, there is a need for teachers to meet in study groups to improve their professional learning of the FoK approach.

8.3. THESIS STATEMENT

Kinh primary teachers should be provided professional development in practices for using FoK in the curriculum because this is likely to improve HMông students' learning and teachers' sense of professional capability. Pedagogies are only developed through ongoing opportunities for professional learning embedded in the culture of the school, the development of content and pedagogical content knowledge, and reflection. It is through just this sort of development that teachers will also be empowered to demand suitable resources that can genuinely support learning.

However, there are challenges posed by the official curriculum policy and related textbooks, because these have not created “hybrid spaces” (Baton & Tan, 2009) which license teachers' efforts to tap into HMông students' and their families' FoK for use as academic knowledge in schools. Thus, there is also a need for a reconsideration of MOET's curriculum policy so as to clearly outline the importance of using ethnic minority students' FoK (in this case specifically HMông minority students) in the teaching and learning in Việt Nam.

The differences between Kinh teachers' and HMông students' languages and cultural knowledge may create tensions that the application of a FoK approach might mitigate. Through professional development teachers could explore the practical uses of HMông students' and their families' FoK to support their students' learning. It is both feasible and educationally valuable for Kinh teachers to explore the uses of HMông students and households' FoK for teaching/learning purposes. Key practical issues in such professional development would include (1) FoK as a context for HMông students' intellectual engagement; (2) FoK for co-constructing and making meaning of academic or other abstract, decontextualised knowledge; and (3) FoK for creating a close, educationally productive relationship between HMông students and their Kinh primary teachers.

Kinh teachers who can use FoK effectively are likely to improve HMông students' learning. They will find that the FoK approach facilitates improvements in their students' study outcomes and their engagement in class. In addition, teachers who use HMông students' FoK will create a basis for the exchange of informal and academic knowledge between students, their families, and schools.

Kinh teachers who can improve HMông students' learning through using a FoK approach are likely

to improve their own professional capability as well. Moreover, FoK provides a vehicle whereby Kinh teachers can undertake innovations in curricula, pedagogy and assessment through their working with HMông minority students. Moving beyond taken-for-granted conceptions in teaching methods, FoK will provide teachers a means whereby they can have the understanding necessary to use students' knowledge to contribute to the content of academic lessons.

8.4. IMPLICATIONS FOR EDUCATION POLICY AND PRACTICE FOR TEACHERS' USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

The current study has explored the nature and practices of the FoK approach to HMông primary students' studies in Việt Nam. There is a need to adjust policies and practices in the teaching of ethnic minority students, especially HMông primary students. This section makes recommendations to improve the effective implementation of the FoK approach in teaching HMông children in primary school in the Việt Nam context.

Recommendation 1: Kinh primary teachers need to be provided with further professional education in areas relevant to a FoK approach.

In order for Kinh primary teachers to engage the FoK approach, there is a need for sufficient support in professional education from different educational sources including school principals, local teacher training college and local educational managers, as well as MOET and educational policy makers.

To develop a deeper understanding of the FoK approach and its implementation in ethnic minority schooling, it is recommended that MOET establish workshops providing professional training and development for all teaching staff -- especially Kinh teachers, who have different culture and language backgrounds from HMông students. These workshops or training courses should focus on key FoK strategies, such as ethnography training prior to home visits and subsequent study group follow up.

For example, “study group meetings” would afford teachers with opportunities to coordinate with researchers to transform data collected from their HMông students and families into new academic knowledge for educational purposes. With the aid of study group meetings, Kinh teachers should come to understand suitable pedagogical FoK and teaching strategies and how to scaffold HMông children’s FoK to these students in lessons.

In practice and through no fault of their own, Kinh teachers lack the skills and experience to collect or analyse data from home visits, due to lack of support from experts, researchers, or professional training courses. This solution might make teachers more confident in making a strong commitment to using the FoK approach with HMông students.

A second example is the creation of more learning spaces such as conferences and workshops, in which teachers from different schools can share their ideas and experiences applying the FoK approach in their classrooms. In practice, there are very few opportunities for teachers in disadvantaged and ethnic schools to sit together and share experiences of teaching ethnic minority students based on their FoK, with the exception of projects such as the MTBBE or SEQAP programs.

Collaboration amongst teachers to share experiences and best practices for teaching minority primary students, particularly HMông students, would be advantageous in helping them to learn from each other about how to explore ethnic minority students’ FoK and how to assimilate FoK into their mainstream curricula.

Based on this study, school staff requires further training and professional development in the following areas:

1. Cultural awareness training
2. Working with parents and students from local ethnic communities
3. Helping HMông ethnic students become proficient in Vietnamese as second language learners
4. Counselling students
5. Tackling issues such as cultural deficit thinking and conflict resolution
6. Facilitating the development of peer friendships and building positive classroom environments

7. Developing positive teacher-student relationships
8. Building supportive home-school partnerships
9. Learning student FoK and the theories underpinning them
10. Catering for diverse learners in the classroom
11. Cultural mentoring

It is emphasised here that professional development opportunities need to be provided regularly and sustained over extended periods, so teachers have time to adjust their attitudes and to adapt and follow various pedagogical methodologies directed at the FoK approach.

In implementing a FoK approach, both children and teachers need to be supported as well as financially by school facilities and educational resources, as well as financially. It would be too burdensome for teachers to be expected to donate their own time visiting students' households and then as researchers exploring their knowledge and resources without adequate support from schools and related organizations, or MOET. They also will be disadvantaged if there are inadequate resources for employing pedagogical practices that use a FoK approach. As well, neither parents nor their children will feel valued as co-constructors of knowledge for educational resources without appropriate investment and support. Clearly, the teachers, HMông students, and their families need to feel that investing in facilities and other resources, and financial support are considered important, to enable them to foster a FoK approach effectively.

Recommendation 2: School curricula need to be adapted to make them more relevant to the knowledge, culture resources, and daily practices and circumstances of HMông students and their families.

There needs to be recognition that HMông students have unique cultural background, language, and intellectual knowledge. Imposing a single, uniform nationwide curriculum upon all students in Việt Nam might result in many disadvantages for HMông students.

For this reason, school curricula and textbooks need to be modified and adjusted to make them more relevant to HMông students' and their community's language and cultural knowledge. In addition,

the curriculum needs additional focus on HMông students' interests, talents and cultural knowledge. When national curricula and textbooks create "hybrid spaces" for HMông students and their families, the boundaries of official school discourse will be expanded and provide opportunities for improving HMông students' study.

For example, developing classroom activities that support developing bilingual capabilities in HMông students, such as using HMông-Vietnamese books, or storybooks, providing opportunities to discuss academic content in HMông language, or supporting reading and writing in HMông language would facilitate HMông students' ability to access content and knowledge from both perspectives of linguistic and cultural knowledge.

Recommendation 3: Kinh teachers teaching HMông students need to be provided special teaching assistance and support in terms of HMông language and culture.

It is critical that Kinh teachers in Việt Nam approach the teaching and learning of their HMông students with a heightened awareness that they bring with them a different background, language, and culture. Thus, they likely have very limited knowledge of HMông language and culture.

Although HMông language courses are available in summers to help them improve their HMông language skills, Kinh teachers have still failed to achieve the results they expected. Kinh teachers' difficulties with HMông grammar and pronunciation, and the linguistic diversity of different HMông groups became apparent throughout their interviews in this study. Helping to minimise such difficulties and improve the effectiveness of HMông language courses needs to be recognised as a crucial strategy going forward.

In this regard, the importance of locals to assist Kinh teachers in the classroom appears to be pivotal to providing support for both Kinh teachers and HMông students in the teaching and learning process. Locals have a deep-seated understanding of the language, culture, strengths and other resources of these ethnic children and therefore the potential to become competent and experienced teachers who can support Kinh primary teachers to explore, learn and effectively employ the FoK approach in the classroom.

Improving teachers' HMông language capabilities would help them to advance cross-cultural acceptance, communication and interaction with HMông students and their families. Teachers' abilities to understand and use HMông language may very well curtail misunderstandings and cultural deficit thinking and lead to "mutual trust" and closer relationships between all involved.

Recommendation 4: Kinh teachers need to develop good relationships with ethnic HMông students.

Kinh teachers need to create "mutual trust" and close relationships, to understand each student as a whole person -- not merely pupil.

Teachers need to be conscious of their students' feelings and well being, willing to collaborate with them to understand and address their concerns. It is very important to establish positive peer and teacher-student relationships between Kinh teachers and HMông students. Peer friendships can provide HMông students with a sense of self-worth, belonging and consistently positive emotional and practical support, in particular regard to those who can often be defensive, unhappy, anxious or unconfident at school.

In practice, visiting the households of their students and increasing efforts to communicate with them and their parents in HMông language are suggested strategies to help Kinh teachers develop deeper understanding, recognition, appreciation and inclusion of HMông children's FoK to enhance their teaching of school curricula.

Recommendation 5: Schools/teachers need to publicly recognise and respect ethnic HMông language, culture, and intellectual knowledge.

The evidence in this study revealed that teachers and schools tend to over-estimate the role of the schools and modern, advanced knowledge of the dominant Kinh, while overlooking the HMông language, experiences and intellectual knowledge acquired by their students from their families and community. This can negatively affect HMông students' classroom engagement, satisfaction with schooling and study outcomes.

The under-estimation of these cultural differences and identities at school might deepen HMông students' senses of inferiority and unworthiness. Therefore, it is important to help teachers recognize and respect the multiple FoK these students and their families have developed within their family and community contexts.

When schools and teachers respect, encourage and account for HMông students' multiple FoK, experiences and practices, and their heritage and identity, HMông students and Kinh teachers are likely to enjoy increased dividends from the teaching and learning process.

Recommendation 6: Local authorities, schools, and teachers need to establish supportive relationships between schools/teachers and HMông parents.

There is a need to consider the key role played by supporting and encouraging HMông parents regarding their children's education.

Local authorities, educational managers and school principals should create supportive networks among schools, and HMông families and their communities, to strengthen connections aimed at improving school-family relationships that presently appear too loose-knit.

Local authorities, educational managers and school principals should also help HMông parents to understand the important roles they play in their children's study and motivate these parents to engage in class activities. Once parents are appreciated as key agents in the delivery of a FoK approach, their engagement is likely to be more quickly recognised as fundamental to achieving maximum efficacy from a FoK approach.

Barriers to linkage between HMông parents, schools and Kinh teachers include language differences, lack of cultural understanding, limited awareness of HMông parents to the values of education and schooling, as well as social disadvantage and poverty among HMông families. To surmount these difficulties and establish more supportive home-school relationships, teachers and schools must lower these barriers. First steps could include the presence of a staff member to speak to parents in HMông, recognition of and deference to HMông students' FoK, talents, experiences and intellectual culture, receptiveness to the concerns and difficulties of HMông students and their

families and collaboration with HMông parents to provide support to resolve their problems.

Recommendation 7: Professional training to pre-service teachers at colleges needs to be focused.

Chapter 2 spoke of teacher shortages, especially qualified local teachers with the same language and background as HMông students, a problematic issue in the effective teaching of HMông children.

Evidence from data analysis illustrated the role of bilingual capability in working with HMông minority students. Thus, education managers need to be collaboratively engaged with teacher training colleges and pedagogical departments at the college level to develop bilingual education for pre-service teachers. This would result in enhanced instructional language proficiency when they become teachers after graduation.

In addition, practice with a FoK approach needs to be provided to pre-service teachers in the form of demonstration teaching lessons. At the same time, pre-service teachers should be afforded opportunities to experiment with, practice and apply FoK strategies in their learning.

8.5. LIMITATIONS INFORMING RECOMMENDATIONS FOR FUTURE RESEARCH

This study explored Kinh primary teachers' curriculum uses of HMông students' FoK in Yên Bái province (Việt Nam). Further research nonetheless remains to be done to fully realise the potentials of the FoK approach for ethnic minority students.

First, because of the need to investigate intercultural differences on the possible uses of HMông students' FoK this study focused on Kinh primary teachers (see 4.4.3 Participant selection). Consequently, this study did not select HMông primary teachers as participants to explore their uses of HMông children's FoK in school curricula. It would be valuable to conduct research involving ethnic minority teachers who have the same languages and cultural backgrounds as their ethnic minority students to learn whether there are differences in the application and potential of

FoK. Such research could examine these teachers' FoK approach to ethnic minority students for insights into practices that might be used by Kinh teachers.

Second, this study focused on teaching ethnic minority students at the primary school level because of the importance of this level to the children's future education (see 4.4.2 Setting selection). In terms of progression and retention there are fewer HMông enrolled in higher educational levels in the Vietnamese system. Hence, further research could investigate the employment of a FoK approach for ethnic minority students at higher levels of education such as secondary schools, high schools, colleges and universities. Such studies could provide useful knowledge about the uses of FoK educational practices beyond the primary school level and indicate its potential for enhancing retention and progression. The findings from such studies could be expected to provide context-specific evidence about the feasibility and educational value of using a FoK approach with ethnic minority students in Việt Nam.

Third, this study explored learning and implementing of HMông ethnic minority students' FoK in teaching curricula in Yên Bái province (see 4.4.2 Setting selection). The HMông people live in different provinces throughout Việt Nam (and in Laos, Cambodia and China), but there is considerable heterogeneity, with internal diversity in terms of language, religions, clothing, and agricultural work. Therefore, it is likely HMông and other ethnic minority groups in different regional and cultural contexts throughout Việt Nam, could benefit from studies that elicit the insights to be gained from research into FoK. Thus, studies of the application of the FoK approach in the other sixty-two (62) provinces throughout Việt Nam with various ethnic minority groups (n=53) could provide educationally valuable knowledge.

Fourth, students, their families and community are important intellectual agents in making FoK educationally valuable to their schooling when coupled with the necessary cooperation of teachers capable of fostering a FoK approach in their classes. Accordingly, this study focused on Kinh primary teachers' practices using HMông students' FoK (see 4.4.3 Participant selection). From here it would be valuable to investigate the perspectives and practices of HMông minority students and their parents on the uses of a FoK approach in primary schools. More generally, research with ethnic minority primary school students and their parents could provide a better understanding of how they use their FoK as educational resources to co-construct knowledge in and around the

classroom. A key question could be, what teaching/learning practices that draw on ethnic minority students' FoK do they find most educationally valuable?

Finally, the evidence in this thesis points to possibilities for higher level of integration by Kinh teachers using HMông students' funds of knowledge. The teachers demonstrated knowledge of how to scaffold HMông students' funds of knowledge into academic knowledge. However, the evidence does not indicate that the teachers were doing so in ways that enabled the HMông students to create "hybrid spaces" teaching/learning experiences (Baton & Tan, 2009). The evidence that was collected pointed to teachers being at the centre of the teaching/learning process, directing the HMông students' uses of their funds of knowledge (see for example, 6.2.2 Funds of knowledge as a scaffold in co-construction of academic knowledge). The concern here is that no evidence was collected to indicate that the Kinh teachers used more interactive, dialogical pedagogies. Nor was evidence collected of them going beyond the knowledge they already had of their HMông students to develop a more compressive understanding of their funds of knowledge. There is a need for evidence of whether and how Kinh teachers provide HMông students with learning opportunities for exploring the uses of their funds of knowledge to extend their academic knowledge. When learner are provided opportunities to "view themselves as citizens of the world who make decisions and take actions in the global interests" (Banks, 2012, p. 31), equality and social justice will be promoted among ethnic communities, nations and regions (Luong Minh Phuong & Nieke, 2014; Zipin et al., 2015).

APPENDICES

Appendix 1: Participant Information Sheet

Project Title

Tài nguyên tri thức của học sinh tiểu học HMông: Một nghiên cứu tình huống trong thực hành giảng dạy của giáo viên Tiểu học là người dân tộc Kinh.

HMông students' funds of knowledge: A case study of Kinh primary school teachers' practices.

Project Summary

You are invited to participate in a research study being conducted by Mrs Tran Thi Thanh Ha, a PhD candidate in School of Education, under the Supervision of Professor Michael Singh and Doctor Jinghe Han in the School of Education, Western Sydney University.

The aims of this research

The aims of this research are to make an original contribution to knowledge about Kinh primary teachers' curriculum uses of HMông students' FoK. This study investigates Kinh teachers' uses of HMông students' funds of knowledge using FoK in teaching practices. Specifically, the purpose for doing so is to answer the research question as to whether and in what ways do Kinh (ethnic majority) primary school teachers use practices related to a FoK approach in serving HMông ethnic minority primary students?

How is the study being paid for?

The study is funded by Việt Nam International Education Development Research Scholarship and UWS Tuition Fee Waiver Scholarship.

What will I be asked to do?

The interview would explore your opinions about FoK approach to teaching primary education, especially to HMông students. In addition, the interview would explore implementation of Kinh teacher incorporation ethnic students' FoK

and of service training and professional development programs relating using HMông students' FoK in your school curricular.

How much of my time will I need to give?

It is estimated that it will be taken 45 to 60 minutes

What benefits will I, and/or the broader community, receive for participating?

Through participating in the interviews, you will have opportunities to consider and investigate results of FoK approach into teaching practices in your school. As a result, a theoretic-pedagogical frameworks and/or learnable materials and suitable textbook and teaching strategies will be generated for the development of primary school education in your school and the local context.

Will the study involve any risk or discomfort for me? If so, what will be done to rectify it?

Participating in this study will not cause any risk or discomfort for you. The researcher can assure you that all the information collected for this research will be kept in confidential. All the interview data will be de-identified by using pseudonyms for analysis, reporting, and storage. Your interview transcript will be returned to you for checking before it is used in research.

If you do feel uncomfortable in the participation, you may withdraw at any time without any consequences or giving any reason.

How do you intend to publish or disseminate the results?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that the participant cannot be identified, except with your permission. The researcher can assure you that all information you provide will be treated confidentially and your responses to the questions will not be able to be linked back to you personally. All the interview data will be de-identified by using pseudonyms for analysis, reporting, and storage.

Will the data and information that I have provided be disposed of?

Please be assured that only the researchers will have access to the raw data you provide and that your data will not be used in any other projects. Please note that minimum retention period for data collection is five years post publication. The data and information you have provided will be securely disposed of.

Can I withdraw from the study?

Participation is entirely voluntary and you are not obliged to be involved. If you do participate you can withdraw at any time without giving reason.

If you do choose to withdraw, any information that you have supplied will be deleted, the hard copies will be shredded, and electronic ones will be deleted completely from where there are stored.

Can I tell other people about the study?

Yes, you can tell other people about the study by providing them with the Chief Investigator's contact details. They can contact the Chief Investigator to discuss their participation in the research project and obtain a copy of the information sheet.

What if I require further information?

Please contact Mrs Tran Thi Thanh Ha should you wish to discuss the research further before deciding whether or not to participate.

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

If you agree to participate in this study, you may be asked to sign the Participant Consent Form. The information sheet is for you to keep and the consent form is retained by the researcher.

This study has been approved by the Western Sydney University Human Research Ethics Committee. The Approval number is H12317

Tran Thi Thanh Ha
PhD Candidate
School of Education
Western Sydney University
M: (+61) 410783310
E: 18274051@student.westernsydney.edu.au

Appendix 2: Invitation Letter (English Version)
(Vietnamese translation is provided in Appendix 2a)

Dear Sir/Madam,

My full name is Tran Thi Thanh Ha. I am studying a Doctor of Philosophy (PhD) at Western Sydney University in Australia. I hereby cordially invite you to participate in my research project.

I am currently working on a PhD research project entitled “HMông students’ funds of knowledge: A case study of Kinh primary school teachers’ practices”.

The aim of my research is to explore Kinh primary teachers’ curriculum uses of HMông students’ FoK.

It is hoped that the research will provide insights and recommendations to help overcome the current ethnic educational problems in Vietnam, identifying the meaning of a FoK approach for teaching ethnic students and its implications for ethnic minority education.

As part of my research, I will interview Kinh primary teachers, school principals, and a local educational manager in Văn Chấn district, Yên Bái province, Vietnam. I would like to invite you to take part in my project.

If you agree to be involved, you will be asked to participate in an interview that will last about 45-60 minutes. The interview would explore your experiences of teaching HMông students and using HMông students’ FoK in teaching curricular. It is important to note that, there are no ‘right’ or ‘wrong’ answers to any of these questions as this research is established to better understand Kinh primary teachers’ curriculum uses of HMông students’ FoK.

With your permission, the interview would be recorded either in the form of expanded notes or audio recordings and later transcribed by me. All information you provide will be treated confidentially. Your name will be used pseudonyms for all research findings in this research.

After the interview, I will summarise our conversation and you will have the opportunity to check what I have recorded accurately represent your answers. I will also provide you with access to the final research report. The findings of this research may be published in a peer-reviewed journal and presented at conferences, but only group data will be reported.

If you do not wish to continue with your involvement in the research, you can withdraw your consent at any time.

If you have any questions about this research, please feel free to contact me on (+61) 410783310 or email 18274051@student.westernsydney.edu.au.

Finally, if you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0493 or email humanethics@westernsydney.edu.au.

All information is confidential and will be handled as soon as possible.

Thank you in anticipation of your involvement.

Yours sincerely,

Tran Thi Thanh Ha

Appendix 2a: Invitation Letter (Vietnamese Version)

Thư Mời Tham Gia Phỏng Vấn

Kính gửi Thầy /Cô:.....

Tôi tên: Trần Thị Thanh Hà, là giảng viên công tác tại trường Cao đẳng Sư phạm Yên Bái. Hiện nay, tôi đang làm nghiên cứu sinh tại trường Đại học Western Sydney ở Úc.

Nghiên cứu của tôi đang thực hiện tập trung vào đề tài giáo dục cho học sinh dân tộc thiểu số (cụ thể là học sinh tiểu học dân tộc HMông tại tỉnh Yên Bái). Đề tài của tôi cụ thể là điều tra về kinh nghiệm và phương pháp giảng dạy của giáo viên tiểu học là người dân tộc Kinh đối với học sinh tiểu học là người HMông dựa trên việc khai thác và sử dụng tài nguyên tri thức của họ.

Tôi hy vọng rằng đề tài này sẽ đem lại những hiểu biết sâu sắc hơn về giáo dục dân tộc thiểu số, đặc biệt đối với học sinh người dân tộc HMông bậc tiểu học, đưa ra các đề xuất nhằm khắc phục những vấn đề giáo dục dân tộc miền núi ở Việt Nam. Đề tài mong muốn sẽ cung cấp những phương pháp dạy học thích hợp cho học sinh dân tộc thiểu số HMông cấp tiểu học, dựa trên việc khai thác tài nguyên tri thức của học sinh HMông và cộng đồng họ. Nghiên cứu này đã được Hội đồng nghiên cứu tại trường đại học Western Sydney phê duyệt và vào sổ số H12317.

Về đối tượng phỏng vấn nghiên cứu, tôi sẽ xin phỏng vấn các giáo viên tiểu học là người dân tộc Kinh hiện đang giảng dạy ở các lớp có 100% học sinh dân tộc HMông, hiệu trưởng nhà trường, và lãnh đạo giáo dục cấp địa phương tại huyện Văn Chấn, tỉnh Yên Bái, Việt Nam.

Nếu quý thầy/cô đồng ý tham gia trả lời phỏng vấn, tôi sẽ trực tiếp liên lạc qua điện thoại tới các thầy cô để thu xếp thời gian và địa điểm thích hợp. Về thời gian phỏng vấn, tùy thuộc vào mức độ chia sẻ của các thầy/cô, một cuộc phỏng vấn có thể kéo dài từ 45 phút tới 60 phút. Địa điểm phỏng vấn tùy thuộc vào lịch công tác và nguyện vọng của quý thầy/cô giáo (phỏng vấn có thể diễn ra tại văn phòng trong trường học hoặc ngoài trường học).

Nội dung phỏng vấn xoay quanh kinh nghiệm và phương pháp giảng dạy của thầy/cô đối với học sinh là dân tộc thiểu số HMông dựa trên việc thầy/cô khai thác và sử dụng tài nguyên tri thức, kinh nghiệm, và các giá trị trong đời sống, văn hoá, xã hội của học sinh dân tộc HMông và cộng đồng của họ. Những câu trả lời của thầy/cô không đánh giá theo quan điểm đúng hay sai vì nghiên cứu này nhằm mục đích để hiểu biết hơn về kinh nghiệm và phương pháp giảng dạy của các giáo viên vùng cao Việt Nam, đặc biệt là giáo viên người dân tộc Kinh thông qua việc sử dụng tài nguyên tri thức của học sinh dân tộc thiểu số và cộng đồng họ để áp dụng vào trong giảng dạy.

Nếu quý thầy/cô đồng ý tham gia phỏng vấn, tôi xin được phép ghi âm, sao chép và dịch cuộc phỏng vấn sang tiếng Anh. Tất cả thông tin trong cuộc phỏng vấn sẽ được bảo mật. Những thông tin thầy cô trả lời trong cuộc phỏng vấn sẽ được mã hóa khi công bố và sẽ chỉ được dùng trong nghiên cứu này.

Sau khi phỏng vấn, tôi sẽ tóm tắt những thảo luận và gửi lại để thầy/cô kiểm tra lại. Thầy/cô sẽ được xem lại bản báo cáo cuối cùng (nếu muốn).

Nếu thầy/cô không muốn tham gia vào nghiên cứu, thầy/cô có quyền rút khỏi cuộc nghiên cứu bất kỳ khi nào.

Xin thầy/cô vui lòng kí vào mẫu đơn đồng ý tham gia nghiên cứu. Mẫu đơn này sẽ được thu lại để lưu trữ trong hồ sơ nghiên cứu.

Nếu thầy/cô muốn biết thêm bất cứ điều gì, xin liên lạc với tôi theo địa chỉ email: tranha310yb@gmail.com hoặc điện thoại di động: (+61) 410783310. Tôi sẽ trả lời ngay khi nhận được thông tin.

Cuối cùng, nếu thầy/cô còn lo lắng về chuẩn đạo đức của nghiên cứu, xin gửi thông tin đến địa chỉ: Human Ethics Officer Research Engagement, Development and Innovation (REDI) Western Sydney University Locked Bag 1797 Penrith NSW 2751.

Tất cả các thông tin sẽ được bảo mật và phản hồi nhanh đến các quý thầy/cô.

Xin chân thành cảm ơn.

Tran Thi Thanh Ha

Appendix 3: Consent form (English Version)

The consent form is provided by Western Sydney University

Project Title:

HMông students' funds of knowledge: A case study of Kinh primary school teachers' practices

I hereby consent to participate in the above named research project.

I acknowledge that:

- I have read the participant information sheet (or where appropriate, have had it read to me) and have been given the opportunity to discuss the information and my involvement in the project with the researcher.
- The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

I consent to:

- *Participating in an interview*
- *Having my information audio recorded*
- *Having my school diary and performances in lesson plan photo taken*

I consent for my data and information provided to be used for this project and other project for an extended period of time.

I understand that my involvement is confidential and that the information gained during the study may be published but no information about me will be used in any way that reveals my identity.

I understand that I can withdraw from the study at any time without affecting my relationship with the researcher, and any organisations involved, now or in the future.

Signed: _____

Name: _____

Date: _____

This study has been approved by the Human Research Ethics Committee at Western Sydney University. The ethics reference number is H12317

What if I have a complaint?

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email humanethics@westernsydney.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

Appendix 3a: Consent form (Vietnamese Version)

PHỤ LỤC 3a: ĐƠN XÁC NHẬN ĐỒNG Ý THAM GIA PHÒNG VẤN

(Mẫu đơn này được phát cho người tham gia phỏng vấn. Người làm nghiên cứu sẽ thu lại để làm dữ liệu. Người tham gia phỏng sẽ giữ lại thư mời tham gia phỏng vấn)

TÊN ĐỀ TÀI NGHIÊN CỨU

Tài nguyên tri thức của học sinh tiểu học HMông: Một nghiên cứu tình huống trong thực hành giảng dạy của giáo viên Tiểu học là người dân tộc Kinh

Người làm nghiên cứu: Trần Thị Thanh Hà

Quý thầy/cô vui lòng đọc thông tin bên dưới và đánh dấu **V** vào ô **Có** hoặc **Không** dưới đây:

	Có	Không
Tôi đồng ý tham gia vào đề tài thực hiện tại Đại học Western Sydney đã được đề cập trên.		
Tôi hiểu rằng những thông tin về việc tham gia vào đề tài nghiên cứu đã được người làm nghiên cứu cung cấp.		
Tôi đồng ý tham gia phỏng vấn.		
Tôi đồng ý cho phép cuộc phỏng vấn được ghi âm.		
Tôi hiểu rằng tôi tham gia phỏng vấn một cách tình nguyện và tôi có thể rút khỏi cuộc phỏng vấn bất kỳ lúc nào.		
Tôi hiểu rằng việc tham gia vào đề tài nghiên cứu này được bảo mật tuyệt đối.		
Tôi hiểu rằng những thông tin để nhận ra tôi sẽ được mã hóa khi phân tích dữ liệu.		
Tôi hiểu rằng thông tin về cá nhân tôi sẽ không được công khai.		
Tôi nhận thức rằng tôi có thể liên lạc với người nghiên cứu bất kì lúc nào để hỏi thông tin họ đã cung cấp cho tôi về thông tin của họ.		
Tôi hiểu rằng đề tài nghiên cứu này đã được duyệt bởi Hội đồng nghiên cứu của trường đại học.		

Họ và tên người tham gia phỏng vấn:

Điện thoại liên hệ:.....

Chữ ký người tham gia phỏng vấn:

Thầy/cô hãy cung cấp địa chỉ email nếu muốn nhận lại tóm tắt của kết quả nghiên cứu.

Địa chỉ email:.....

Appendix 4: In-depth interview guide

Appendix 4a: Interview with primary school teachers

BACKGROUND INFORMATION

What is your full name? Gender: Male/Female

How old are you?

Which is your highest qualification? (College, BA, MA)

How long have you been a teacher at this school? Do you have any other roles?

OPENING PROMPTS

Could you describe learning characteristics of HMông students in your class? How do HMông students perform in comparison to other ethnic groups? Why?

What kinds of effective teaching methods to teaching HMông students in your class? In your opinion, under which conditions do HMông could facilitate their classroom engagement and study' outcomes?

FURTHER PROMPTS REGARDING KINH TEACHERS' USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE

What is significant out-of-school knowledge HMông students (HMông students' FoK) bring to your class (e.g. HMông language, knowledge and practices in their daily life, interests, or cultural practices, etc)? In response to these HMông students' FoK, do you approve of introducing their FoK in teaching curricular? Are they useful and worth for teaching and learning practices?

Have you made any effort to explore your HMông students' FoK? What methods you used to explore and understand your HMông students' FoK?

Have you ever visited your HMông students' families for learning their FoK or other purposes and, if so, how often?
Can you describe for me what did you do while visiting their students' families.

FURTHER PROMPTS REGARDING TEACHERS' TEACHING PRACTICES FOR APPLYING HMÔNG STUDENTS' FOK IN TEACHING CURRICULA

What teaching methods and strategies do you perceive as appropriate for teaching based upon HMông students' FoK?

Do you use your HMông students' FoK in order to support teaching curricular? If have, what pedagogical methods and how do you use to integrate HMông students' FoK into teaching curricular to co-construct academic knowledge or new concepts? Which subject or topics has the academic knowledge with the most integration?

What are the irrelevant points in school curriculum and textbooks that constrain HMông students' classroom engagement and study' outcomes (e.g. instructional language, social-cultural context, living conditions, cultural practices, HMông parents' needs, etc)?

Have you ever invited HMông parents in contribution their FoK to support your teaching practices in class?

Can you demonstrate the effectiveness of using HMông students' FoK in teaching curricular in term of HMông students' outcomes and your professional capability? If not, please explain why.

FURTHER PROMPTS REGARDING EDUCATIONAL POTENTIALS AND DIFFICULTIES OF USING HMÔNG STUDENTS' FOK IN TEACHING CURRICULAR

In terms of pedagogical practices, what advantages or disadvantages become manifest in your effort to bring HMông students' FoK in teaching curricular?

Is your personal background advantageous or disadvantageous when you try to explore and use the FoK approach?

What are supports that you receive to integrate HMông culture in your teaching practices?

What will you need to be supported in applying HMông students' FoK in the teaching practices to HMông students?

STIMULATE RECALL INTERVIEW

What were you thinking when....?

You were..... What were your thoughts when you decided to.....?

Why did/did not you decide to...?

Appendix 4b: Interview with primary school principals and local educational manager

BACKGROUND INFORMATION

What is your full name? Gender: Male/Female

How old are you?

Which is your highest qualification? (College, BA, MA)

OPENING PROMPTS

Do you think that exploring and using out-of-school knowledge of HMông students (HMông students' FoK) is benefit to teaching HMông minority students? Why or otherwise?

FURTHER PROMPTS REGARDING KINH TEACHERS' USES OF HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN TEACHING CURRICULA

How are the relevances/ irrelevances of existing school curriculum and textbooks for ethnic minority students, specifically HMông children in term of language, social-cultural context or cultural practices? What are the negative impacts of these irrelevances towards HMông students' learning?

Are there the uses of out-of-school knowledge of HMông students (HMông students' FoK) in the teaching curricular? If yes, how is it?

What are advantages and disadvantages of teachers' uses of HMông students' FoK in their teaching practices? What are the difficulties of Kinh teachers who have different language and cultural knowledge from HMông students in teaching HMông students and in the effort to learn and use HMông students' FoK in teaching curricular?

What are the methods to engage HMông parents in contribution their children's study and using their FoK in order to support teaching practices?

What are the actions in order to improve the effectiveness of the curriculum and textbooks for HMông students toward valuing and using HMông students' FoK in teaching curricular?

What are the supports for teachers, especially Kinh primary teachers to use HMông students' FoK in order to contextualise the instructional content while teaching HMông students? What are the strains in providing of these supports?

FURTHER PROMPTS REGARDING ORIENTAIONS AND DIRECTIONS ON DEVELOPING POTENTIALS OF USING HMÔNG STUDENTS' FUNDS OF KNOWLEDGE IN TEACHING CURRICULA

How a FoK approach is addressed in inservice training or professional development programs for primary teachers?

What are strategies and programs to improve Kinh primary teachers' uses of HMông students' FoK in teaching curricular?

Locked Bag 1797
Penrith NSW 2751 Australia
Research Engagement, Development and Innovation (REDI)
REDI Reference: H12317
Risk Rating: Low 2 - HREC



HUMAN RESEARCH ETHICS COMMITTEE

31 July 2017

Professor Michael Singh
School of Education

Dear Michael,

I wish to formally advise you that the Human Research Ethics Committee has approved your research proposal H12317 "Primary teachers' incorporation of students' Funds of Knowledge: A case study in Vietnam", until 31 July 2021 with the provision of a progress report annually if over 12 months and a final report on completion. In providing this approval the HREC determined that the proposal meets the requirements of the National Statement on Ethical Conduct in Human Research.

This protocol covers the following researchers:

Michael Singh, Jinghe Han, Thanh Ha Tran

Conditions of Approval

1. A progress report will be due annually on the anniversary of the approval date.
2. A final report will be due at the expiration of the approval period.
3. Any amendments to the project must be approved by the Human Research Ethics Committee prior to being implemented. Amendments must be requested using the HREC Amendment Request Form: http://www.westernsydney.edu.au/data/assets/word_doc/0012/1096895/FORM_Amendment_Request.docx
4. Any serious or unexpected adverse events on participants must be reported to the Human Research Ethics Committee via the Human Ethics Officer as a matter of priority.
5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the Committee as a matter of priority.
6. Consent forms are to be retained within the archives of the School or Research Institute and made available to the Committee upon request.
7. Project specific conditions:
There are no specific conditions applicable.

Please quote the registration number and title as indicated above in the subject line on all future correspondence related to this project. All correspondence should be sent to the e-mail address: humanethics@westernsydney.edu.au as this e-mail address is closely monitored.

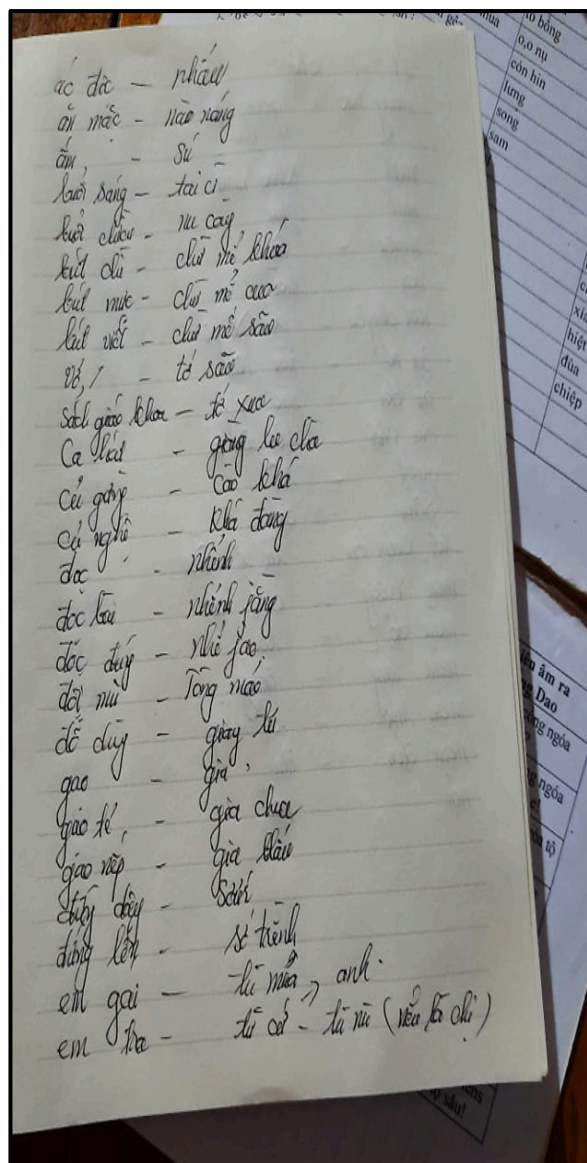
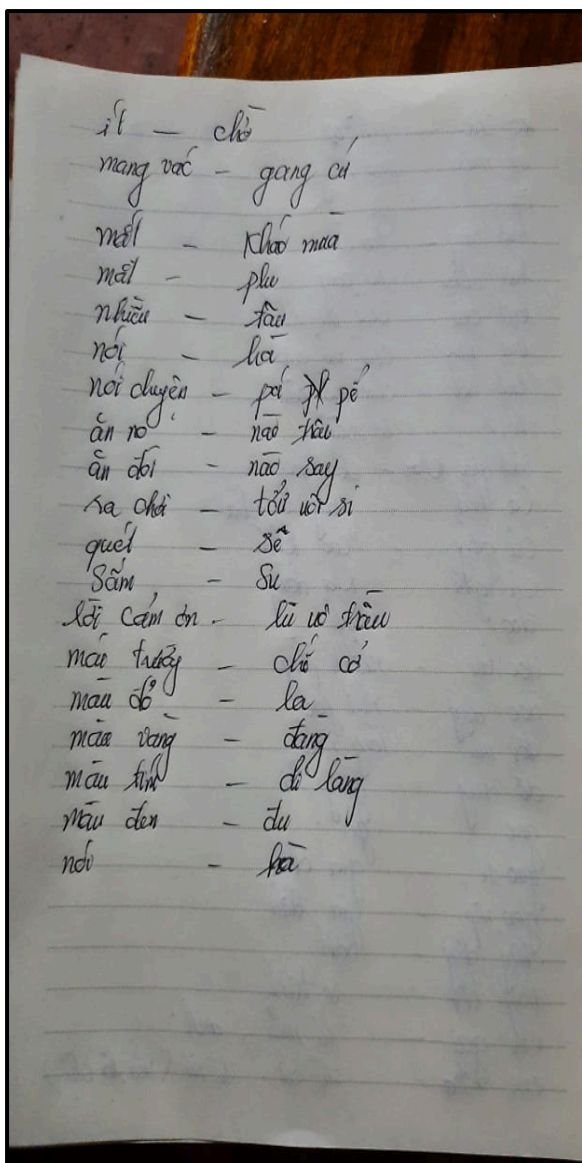
Yours sincerely


Professor Elizabeth Deane
Presiding Member,
Western Sydney University Human Research Ethics Committee

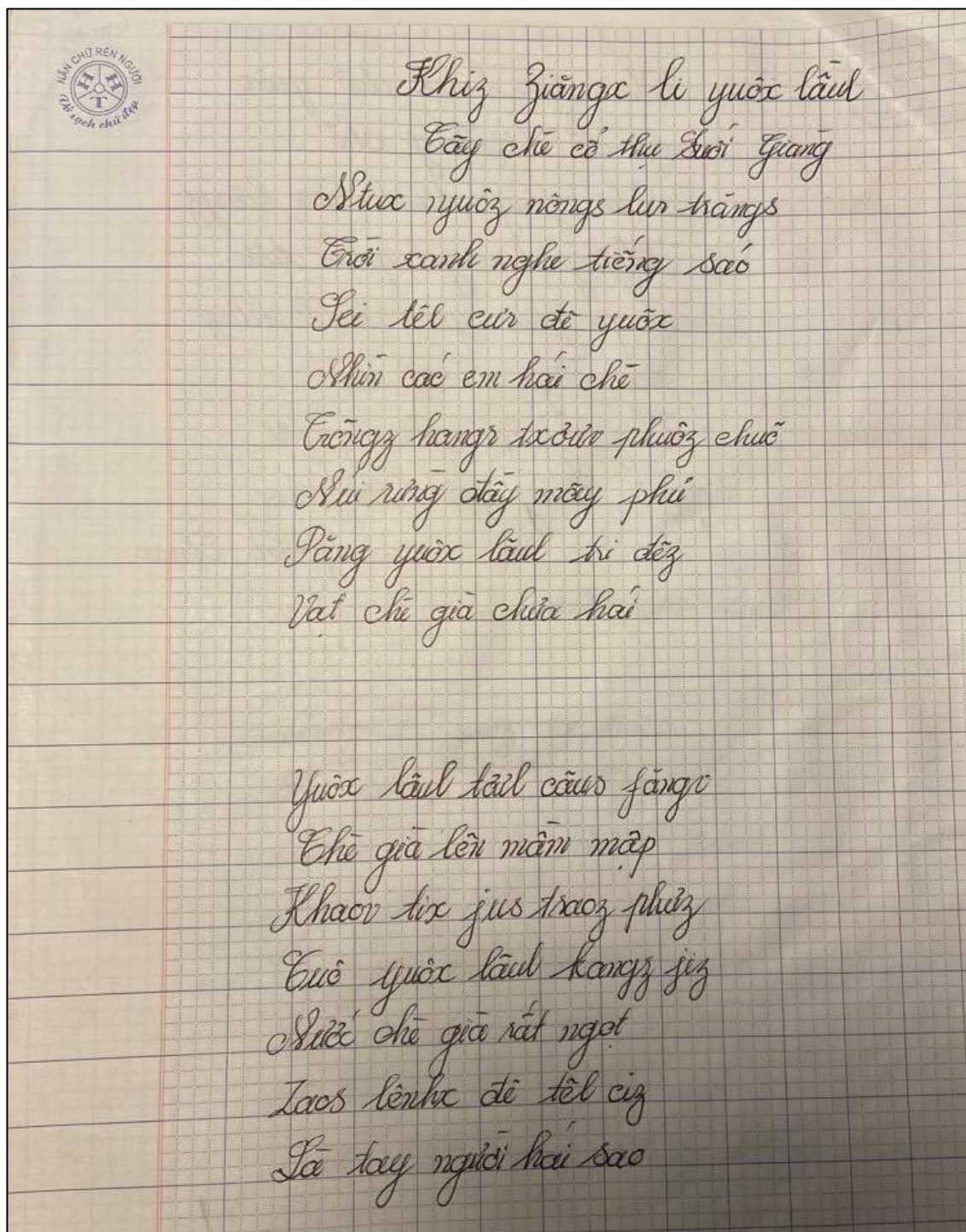
Appendix 6: Educational documents

Appendix 6a: Teachers's dairy

This is Teacher Huong's the dairy where she wrote down HMông vocabulary and poems and uses them in her teaching practices as a biligual teacher. The photos provided by the teacher teaching



at Trâu Piôr semi-boarding primary school, Văn Chấn district, Yên Bái province.



Appendix 6b: Teachers' lesson plans

- Teacher Anh's lesson plan of Unit 30: "Agricultural activities" (*Hoạt Động Nông Nghiệp*) in the subject Nature and Society for Year 3.
- Teacher Hien's lesson plan of Unit 32- "Socio-economic geography of Yên Bái province" (*Địa lý kinh tế xã hội tỉnh Yên Bái*) in the subject Geography (môn Địa Lý) for Year 5 Hông student.

Địa lí (30): Hoạt Động Nông Nghiệp

Những kiến thức học sinh đã biết:	Những kiến thức mới cần được hình thành:
- Biết hoạt động trồng trọt, chăn nuôi của gia đình	- Kể tên một số hoạt động nông nghiệp - Nêu lợi ích của hoạt động nông nghiệp

A. Mục tiêu :

1.Kiến thức:

- Kể tên một số hoạt động nông nghiệp
- Nêu lợi ích của hoạt động nông nghiệp.

2. Kỹ năng: Vận dụng kiến thức đã học vào cuộc sống

3. Thái độ: Giáo dục HS lợi ích của hoạt động nông nghiệp.

* Giáo dục bảo vệ môi trường: Biết hoạt động nông nghiệp, lợi ích và một số tác hại (nếu thực hiện sai) của hoạt động đó.

B. Chuẩn bị:

1. Đồ dùng dạy- học:

- HS: Hình SGK
- GV: Sưu tầm tranh ảnh về hoạt động nông nghiệp.

2. PP dạy học : PP hỏi đáp , ...

C. Các hoạt động dạy học:

Hoạt động của GV	Hoạt động của HS
<p><u>HD1:</u> Kiểm tra bài cũ(4')</p> <p>- Hãy kể tên các hoạt động thông tin liên lạc ở địa phương em?</p> <p>-> Nhận xét</p> <p><u>HD2:</u> Bài mới(20')</p> <p><u>1.Hoạt động nhóm</u></p> <p><u>Bước 1:</u></p> <p>+ Chia nhóm cho HS quan sát tranh ở trang 58, 59 (SGK) và thảo luận theo gợi ý sau:</p> <p>+ Kể tên các hoạt động được giới thiệu trong hình?</p> <p><u>Bước 2:</u></p> <p>+ Gọi các nhóm nêu kết quả</p> <p>-> nhận xét, giới thiệu thêm 1 số hoạt động khác như: Trồng ngô, khoai, sắn, chè.chăn nuôi trâu, bò, dê.</p> <p>* Kết luận: Các hoạt động trồng trọt, chăn nuôi, đánh bắt và nuôi trồng thủy sản, trồng rừng được gọi là hoạt động nông nghiệp.</p> <p>*GD BVMT:Các hoạt động đó mang lại lợi ích gì? và một số tác hại (nếu thực hiện sai) của hoạt động đó.</p> <p><u>2.Thảo luận từng cặp</u></p> <p><u>Bước 1:</u>yêu cầu và HD HS thảo luận</p> <p><u>Bước 2:</u> Gọi HS trình bày</p> <p>-> nhận xét chung</p> <p><u>HD3:</u>Triển lãm góc HD nông nghiệp (8')</p> <p><u>Bước 1:</u> Chia lớp làm 4 nhóm, phát cho mỗi nhóm 1 tờ giấy</p> <p><u>Bước 2:</u> Gọi các nhóm bình luận</p> <p>-> nhận xét chung và tuyên dương những nhóm làm tốt.</p> <p><u>HD4:</u> Cùng cổ - dặn dò (3')</p> <p>- Nêu lại ND bài?</p> <p>- Nhận xét giờ học.</p>	<p>- 1-2HS nêu</p> <p>-> Nhận xét</p> <p>- 3 HS lên trình bày.</p> <p>- Thảo luận theo nhóm 3</p> <p>- Đại diện các nhóm trình bày kết quả thảo luận.</p> <p>- Các nhóm khác bổ sung.</p> <p>- Từng cặp HS kể cho nhau nghe về hoạt động nông nghiệp nơi các em đang sống</p> <p>- 1 số cặp HS trình bày, các cặp khác bổ sung.</p> <p>- HS dán tranh theo suy nghĩ và thảo luận từng nhóm</p> <p>- Từng nhóm bình luận về tranh của các nhóm xoay quanh nghề nghiệp và lợi ích của các nghề đó.</p>

Địa lí (32): Địa lí Kinh tế - Xã hội tỉnh Yên Bái (địa lí địa phương)

Những KT HS đã biết liên quan đến BH:	Những KT mới cần hình thành cho HS:
-Biết hình dạng, ranh giới của tỉnh Yên Bái, kể tên các huyện, thị xã, thành phố trong tỉnh. -Biết chỉ tỉnh Yên Bái trên Bản đồ VN	-Biết số dân và số dân tộc sinh sống trên địa bàn tỉnh; -Các ngành SX chính ở tỉnh Yên Bái

A. Mục tiêu:

1. KT: Biết số dân và số dân tộc sinh sống trên địa bàn tỉnh; vai trò và đặc điểm sản xuất hai ngành nông nghiệp và công nghiệp của tỉnh ta.
2. KN: Biết khai thác thông tin, quan sát ảnh để hình thành kiến thức.
3. TD: Giáo dục HS tinh thần đoàn kết các dân tộc; Biết yêu quê hương.

B. Chuẩn bị:

1. Đồ dùng dạy học:
 - Bản đồ Địa lí tỉnh Yên Bái
 - Tranh ảnh theo chủ đề bài học.
2. Phương pháp:
 - Quan sát, thảo luận nhóm, thực hành.

C. Các hoạt động dạy học:

Hoạt động của GV	Hoạt động của HS
<p><u>HĐ 1:Kiểm tra bài cũ(5’):</u></p> <p>-Nêu vị trí địa lí và địa hình của Yên Bái?</p> <p>-Kể tên một số dãy núi và một số con sông chảy qua địa phận Yên Bái?</p> <p>- GV nhận xét, tuyên dương.</p> <p><u>HĐ 2: Bài mới(25’)</u></p> <p><u>(1)Dân cư - Dân tộc và sự phân bố dân cư:</u></p> <p>(Làm việc nhóm 4 KTKPB)</p> <p>-Phát phiếu học tập.Cho HS quan sát bản đồ Địa lí tỉnh Yên Bái và dựa vào những hiểu biết của bản thân, trả lời các câu hỏi:</p>	<p>+Số dân trung bình của tỉnh Yên Bái năm 2008 khoảng:750.243 người,mật độ dân số là 109 người/ km2</p> <p>+Toàn tỉnh có 16 dân tộc anh em sinh sống như:Kinh,Tày,Nùng,Dao, Mông.</p>

<p>+Hãy cho biết số dân trung bình của tỉnh Yên Bái năm 2008?</p> <p>+Toàn tỉnh có bao nhiêu dân tộc anh em sinh sống? Kể tên một số dân tộc sống ở Yên Bái mà em biết?</p> <p>+Em có nhận xét gì về sự phân bố dân cư ở tỉnh ta?</p> <p>-Mời đại diện trình bày kết quả</p> <p>-Các HS khác nhận xét, bổ sung.</p> <p>-Kết luận, tuyên dương những nhóm thảo luận tốt.</p> <p><u>(2)Các hoạt động kinh tế: (Làm việc N 2)</u></p> <p>-Cho HS quan sát bản đồ Địa lí tỉnh Yên Bái, tranh ảnh SGK và dựa vào những hiểu biết của bản thân, trả lời các câu hỏi:</p> <p>+Kể tên một số hoạt động kinh tế của nhân dân tỉnh Yên Bái? Đa số người dân làm nghề gì?</p> <p>+Sản xuất nông nghiệp tỉnh Yên Bái gồm những ngành nào?</p> <p>+Kể tên những sản phẩm nông nghiệp chủ yếu của tỉnh ta?</p> <p>+Kể tên một số ngành công nghiệp của tỉnh ta?</p> <p>+Kể tên những sản phẩm công nghiệp của tỉnh Yên Bái?</p> <p>-Mời đại diện nhóm trình bày kết quả.</p> <p>-Cả lớp và GV nhận xét.</p> <p>-Kết luận chung.</p> <p><u>HĐ 3. Củng cố(5’):</u></p> <p>-Nhận xét giờ học.</p> <p>-Dặn HS về nhà tìm hiểu thêm về dân cư, kinh tế và văn hoá của Yên Bái và chuẩn bị bài sau “Ôn tập cuối năm”</p>	<p>dân tộc Tày là đông nhất chiếm khoảng 30%</p> <p>+Dân cư ở tỉnh Yên Bái phân bố không đồng đều</p> <p>+Nông nghiệp, lâm nghiệp, dịch vụ,...</p> <p>Đa số người dân làm nông nghiệp.</p> <p>+Vật nuôi: Lợn, gà, vịt, trâu, bò, dê, cá,...</p> <p>+Cây trồng: Lúa, ngô, khoai sắn, chè, ...</p>
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Appendix 7: Photographs in october-december 2017



Hmong girls must often perform domestic chores while attending school. Here, a Hmong female student takes care of her younger sibling during classhours. Photo taken at a satellite school at Khiz Zangx semi-boarding primary school, Văn Chấn district, Yên Bái province.





Hmong female students were embroidering out of school time. Photo taken at a boarding house at Khiz Zangx semi-boarding primary school, Văn Chấn district, Yên Bái province.

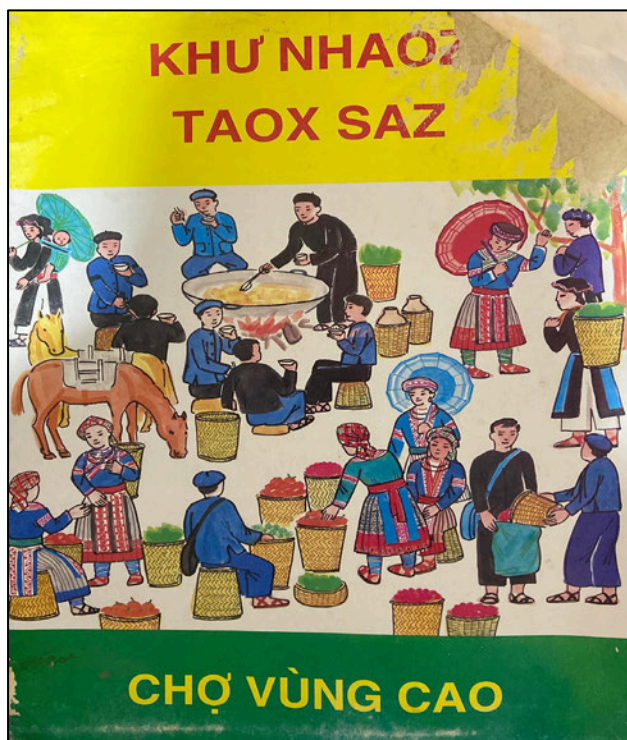


Worship festival for the ancestors of tea trees of HMông community.

Photo taken by teachers teaching at Khiz Zangx semi-boardng primary school, Văn Chấn district, Yên Bái province.



Being as a teching assistant, a HMông local (*trợ giảng*) use mother tongue to explain new concepts to Hmong minority students in Year 1 at a satellite school of Trâu Piôr semi-boardng primary school. The photo provided by a school principal at Trâu Piôr semi-boardng primary school, Văn Chấn district, Yên Bái province.



TUX LUL	TỪ NGỮ
hangx huv	hàng hóa
khur taox saz	chợ vùng cao
njik hau	chải tóc
nrour nux	đặc sản
kruonhaoz waiv côx	khách nước ngoài
tax drangs	miền xuôi
taox saz	miền ngược
thaux huv	thò hàng
thauk grêl taus	gặp ghềnh
thauk ndê taox	khúc khuỷu
tsoav ar	soi gương
txu huv	dỡ hàng
vix xaur	quây quần

TUX LUL	TỪ NGỮ
chaos ntông vông jôngr	trồng cây gây rừng
cheix nangs hluz	mùa lũ
fêv nzâus	bạc màu
naox tsâu hnangr sur	âm no
ntâu têx uô ntâu	bạt ngàn
tuos zuos	heo hắt
ruor puol	tàn phá
kruor kroux	khô cạn
tsax kuk	chim muông
nangl nongs	muông thú

Some materials are produced by teachers and integrated in extra school curriculum for Hmông students in Khiz Zangx semi-boardings primary school. FoK of the Hmong people such as Hmong customs, and production practices are included in the materials. Photos provided by a school principal at Khiz Zangx semi-boardings primary school, Văn Chấn district, Yên Bái province.

REFERENCES

- Aguirre, J., Turner, E., Bartell, T., Kalinec-Craig, C., Foote, M., Roth McDuffie, A., & Drake, C. (2013). Making connections in practice: How prospective elementary teachers connect to children's mathematical thinking and community funds of knowledge in mathematics instruction. *Journal of Teacher Education*, 64(2), 178-192.
- Aikman, S., & Pridmore, P. (2001). Multigrade schooling in 'remote' areas of Vietnam. *International Journal of Educational Development*, 21(6), 521-536.
- Amaro-Jiménez, C., & Semingson, P. (2011). Tapping into the funds of knowledge of culturally and linguistically diverse students and families. *NABE News*, 33(5), 5-8.
- Andrews, J., & Yee, W. (2006). Children's 'funds of knowledge' and their real life activities: Two minority ethnic children learning in out-of-school contexts in the UK. *Educational Review*, 58(4), 435-449.
- Banks, J. (2012). Multicultural and citizenship education in diverse societies. In N. Palaologou & G. Dietz (Eds.), *Mapping the broad field of multicultural and intercultural education*

worldwide: Towards the development of a new citizen (pp. 22-44). Cambridge Scholars Publishing.

Barton, A., & Tan, E. (2009). Funds of knowledge and discourses and hybrid space. *Journal of Research in Science Teaching*, 46(1), 50-73.

Basu, S., & Barton, A. (2007). Developing a sustained interest in science among urban minority youth. *Journal of Research in Science Teaching*, 44(3), 466-489.

Baulch, B., Nguyen, T. M. H., Nguyen, T. T. P., & Pham, T. H. (2011). *Ethnic minority poverty in Vietnam*. Federal Reserve Bank of St Louis.

Baulch, B., Truong, T. K. Ch., Haughton, D., & Haughton, J. (2007). Ethnic minority development in Vietnam. *The Journal of Development Studies*, 43(7), 1151-1176.

Benson, C. (2005). *The importance of mother tongue-based schooling for educational quality*. Paper commissioned for the EFA Global Monitoring Report 2005, The Quality Imperative. Retrieved from www.unesco.org/en/efareport/reports/2005-quality/

Benson, C. (2016). *Addressing language of instruction issues in education: Recommendations for documenting progress (Education Monitoring Report)*. UNESCO.
<http://unesdoc.unesco.org/images/0024/002455/245575E.pdf>

Berliner, D. (2002). Comment: Educational research: The hardest science of all. *Educational Researcher*, 31(8), 18-20.

Brinkmann, S., Kvale, S. (2018). *Doing Interviews* (2nd ed.). Sage.

Brooks, J., & Brooks, M. (1999). *In search of understanding: The case for constructivist classrooms*. ASCD.

Bui, T. K. T. (2014). *An investigation into the use of culturally responsive teaching strategies: Teaching English to Muong ethnic minority students at a tertiary institution in Vietnam* [Doctoral dissertation, Victoria University of Wellington]. Research Direct. <https://researcharchive.vuw.ac.nz/xmlui/bitstream/handle/10063/3227/thesis.pdf?sequence=2>

Bui, T. N. T., Ngo, T. H. N., Nguyen, T. M. H., & Nguyen, L. T. H. (2019). Access and equity in higher education in light of Bourdieu's theories: A case of minority students in northwest Vietnam. In N. T. Nguyen & L. T. Tran (Eds.), *Reforming Vietnamese higher education* (pp. 149-169). Springer.

Carmona, J., & Bernal, D. (2012). Oral histories in the classroom. In C. E. Sleeter & E. Soriano (Eds.), *Creating solidarity across diverse communities: International perspectives in education* (pp. 114-130). Teachers College Press.

Cha, P. Y. (2010). *An introduction to H'Mông culture*. NC. McFarland & Company, Inc.

- Chao, X., & Mantero, M. (2014). Church-based ESL adult programs: Social mediators for empowering “family literacy ecology of communities”. *Journal of Literacy Research*, 46(1), 90–114.
- Chesworth, L. (2016). A funds of knowledge approach to examining play interests: Listening to children’s and parents’ perspectives. *International Journal of Early Years Education*, 24(3), 294-308.
- Cooper, M., & Hedges, H. (2014). Beyond participation: What we learned from Hunter about collaboration with Pasifika children and families. *Contemporary Issues in Early Childhood*, 15(2), 165-175.
- Cooper, R. (1998). *The HMông: A guide to traditional lifestyles*. Marshall Cavendish Academic.
- Cooper, S. J. (2016). *Exploring the uses of cultural Funds of Knowledge among ethnic minority immigrant college students in their constructions of learning identities within a collaborative photovoice project* [Doctoral dissertation, The City University of New York]. Research Direct. <https://search-proquest-com.ezproxy.uws.edu.au/docview/1765694950?pq-origsite=primo>
- Creese, A., & Blackledge, A. (2010). Translanguaging in the bilingual classroom: A pedagogy for learning and teaching? *The Modern Language Journal*, 94(1), 103-115.

- Cremin, T., Mottram, M., Collins, F., Powell, S., & Drury, R. (2012). Building communities: Teachers researching literacy lives. *Improving Schools*, 15(2), 101-115.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.
- Culas, C. (2010). The ethnonyms of the HMông in Viet Nam: early history (1856-1924) and practical epistemology. In F. Robinne (Ed.), *Inter-ethnic dynamics in Asia: Considering the other through ethnonyms, territories, and rituals* (pp.13-41). Routledge.
- Da silveira e Silva, R., & Sznclwar, L. (2012). The use of participant-observation protocol in an industrial engineering research. *Work*, 41(1), 120-126.
- Dang, H. A. (2012). A widening poverty gap for ethnic minorities. In G. H. Hall & H. A. Patrinos (Eds.), *Indigenous peoples, poverty, and development* (pp. 274-309). Cambridge University Press.
- Dang, P. T., & Boyd, W. A. (2014). Renovating early childhood education pedagogy: A case study in Vietnam. *International Journal of Early Years Education*, 22(2), 184-196.

DeFranzo, S. E. (2014, October 15). *Advantages and disadvantages of face-to-face data collection*. Snapsurveys. <https://www.snapsurveys.com/blog/advantages-disadvantages-facetoface-data-collection/>

Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research* (4th ed.). Sage.

Djité, P. G. (2011). *The language difference: Language and development in the Greater Mekong Subregion*. Multilingual Matters.

Doan, H. D. (2005). Moral education or political education in the Vietnamese educational system?. *Journal of Moral Education*, 34(4), 451-463.

Duchesne, S., & McMaugh, A. (2018). *Educational psychology for learning and teaching* (6th ed.). Cengage.

Duffy, J., Harmon, R., Ranard, D. A., Thao, B., Yang, K., & Herr, P. (2004). *The HMông: An introduction to their history and culture*. Center for Applied Linguistics.

Esteban-Guitart, M. (2011). The consumer capitalist society and its effects on identity: A macro cultural approach. *Psicologia Política*, 11(21), 159-170.

Esteban-Guitart, M. (2012). Towards a multimethodological approach to identification of funds of identity, small stories and master narratives. *Narrative Inquiry*, 22(1), 173-180.

- Esteban-Guitart, M. & Bastiani, J. B. (2011). Constructing the self-concept through culture: A study with indigenous and mestizos students from different educative settings in Chiapas (Mexico). *Cross-Cultural Communication*, 7(2), 14-21.
- Esteban-Guitart, M. & Ratner, C. (2011). A macro cultural psychological theory of identity. *Journal of Social Distress and the Homeless*, 20(1-2), 1-22.
- Esteban-Guitart, M., & Moll, L. (2014a). Funds of identity: A new concept based on the funds of knowledge approach. *Culture & Psychology*, 20(1), 31-48.
- Esteban-Guitart, M., & Moll, L. (2014b). Lived experience, funds of identity and education. *Culture & Psychology*, 20(1), 70-81.
- Ewing, B. F. (2012). Mathematics funds of knowledge: Sotmaute and Sermaute fish in a Torres Strait Islander community. *Australian Journal of Adult Learning*, 52(1), 134-152.
- Firth, R. (2011). Making geography visible as an object of study in the secondary school curriculum. *Curriculum Journal*, 22(3), 289-316.
- Fitts, S. (2009). Exploring third space in a dual-language setting: Opportunities and challenges. *Journal of Latinos and Education*, 8(2), 87-104.
- Flick, U. (2014). *An introduction to qualitative research* (5th ed.). Sage.

- Fraser-Abder, P., Doria, J. A., Yang, J. S., & De Jesus, A. (2010). Using funds of knowledge in an ethnically concentrated classroom environment to teach nutrition. *Science Activities*, 47(4), 141-150.
- Fryer, C., Mackintosh, S., Stanley, M., & Crichton, J. (2012). Qualitative studies using in-depth interviews with older people from multiple language groups: Methodological systematic review. *Journal of Advanced Nursing*, 68(1), 22-35.
- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106-116.
- Gay, G. (2013). Teaching to and through cultural diversity. *Curriculum Inquiry*, 43(1), 48-70.
- Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.
- General Statistical Office (GSO). (2009). *The 2009 Vietnam population and housing census: Completed results*. Statistical Publishing House.
- General Statistics Office (GSO). (2011). *Viet Nam population and Housing census 2009: Education in Viet Nam: An analysis of key indicators*.
https://vietnam.unfpa.org/sites/default/files/pub-pdf/5_Monograph-Education.pdf
- Giacchino-Baker, R. (2007). Educating ethnic minorities in Vietnam: Policies and perspectives. *Kappa Delta Pi Record*, 43(4), 168-173.

Glewwe, P., & Jacoby, H. (1998). School enrollment and completion in Vietnam: An investigation of recent trends. In D. Dollar, P. Glewwe & J. Litvack (Eds.), *Household welfare and Vietnam's transition* (pp. 201-234). World Bank.

Glewwe, P., Chen, Q., & Katare, B. (2012). *What determines learning among Kinh and ethnic minority students in Vietnam? An analysis of the round 2 young lives data*. Young Lives.

Glewwe, P., Krutikova, S., & Rolleston, C. (2017). Do schools reinforce or reduce learning gaps between advantaged and disadvantaged students? Evidence from Vietnam and Peru. *Economic Development and Cultural Change*, 65(4), 699-739.

González, N. (1995). Processual approaches to multicultural education. *The Journal of Applied Behavioral Science*, 31(2), 234-244.

González, N., & Moll, L. (2002). Cruzando el puente: Building bridges to funds of knowledge. *Educational Policy*, 16(4), 623-641.

González, N., Andrade, R., Civil, M., & Moll, L. (2001). Bridging funds of distributed knowledge: Creating zones of practices in mathematics. *Journal of Education for Students Placed at Risk*, 6(1-2), 115-132.

González, N., Moll, L., & Amanti, C. (2005). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Lawrence Erlbaum Associates.

González, N., Wyman, L., & O'Connor, B. H. (2016). The past, present, and future of “funds of knowledge”. In B. A. Levinson & M. Pollock (Eds.), *A companion to the anthropology of education* (pp. 481-494). Wiley-Blackwell.

Government of Vietnam. (2012). *Decision No.1210/DQ-TTg by Prime Minister on the national program of education and training for the period 2012-2015 dated 5 September 2012*.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied Thematic Analysis*. Sage.

Gutiérrez, K. D., & Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher*, 32(5), 19-25.

Hamano, T. (2008). Educational reform and teacher education in Vietnam. *Journal of Education for Teaching*, 34(4), 397-410.

Hedges, H. (2011). Rethinking Sponge Bob and Ninja Turtles: Popular culture as funds of knowledge for curriculum co-construction. *Australasian Journal of Early Childhood*, 36(1), 25-29.

Hedges, H. (2012). Teachers’ funds of knowledge: A challenge to evidence-based practice. *Teachers and Teaching*, 18(1), 7-24.

Hedges, H. (2015). Sophia's funds of knowledge: Theoretical and pedagogical insights, possibilities and dilemmas. *International Journal of Early Years Education*, 23(1), 83-96.

Hedges, H., & Cullen, J. (2012). Participatory learning theories: A framework for early childhood pedagogy. *Early Child Development and Care*, 182(7), 921-940.

Hedges, H., Cullen, J., & Jordan, B. (2011). Early years curriculum: Funds of knowledge as a conceptual framework for children's interests. *Journal of Curriculum Studies*, 43(2), 185-205.

Hedges, H., Fler, M., Fler-Stout, F., & Le, T. B. H. (2016). Aspiring to quality teacher-parent partnerships in Vietnam: Building localised funds of knowledge. *International Research in Early Childhood Education*, 7(3), 49-68.

Henderson, D., & Zipin, L. (2010). Bringing clay to life: Developing student literacy through clay animation artwork to tell life-based stories. In B. Prosser, B. Lucas & A. Reid (Eds.), *Connecting lives and learning: Renewing pedagogy in the middle years* (pp. 20-39). Wakefield Press.

Hernandez, C. M., Morales, A. R., & Shroyer, M. G. (2013). The development of a model of culturally responsive science and mathematics teaching. *Cultural Studies of Science Education*, 8(4), 803-820.

- Hill, S. (2010). The millennium generation: Teacher-researchers exploring new forms of literacy. *Journal of Early Childhood Literacy*, 10(3), 314-340.
- Hoang, L. (2013, April 24). *Vietnam's bilingual experiment*. The New York Times. <https://latitude.blogs.nytimes.com/2013/04/24/vietnam-experiments-with-bilingual-education/>
- Hogg, L. (2011). Funds of knowledge: An investigation of coherence within the literature. *Teaching and Teacher Education*, 27(3), 666-677.
- Hogg, L. (2012). Funds of knowledge: An examination of theoretical frameworks. *New Zealand Annual Review of Education*, 21, 47-76.
- Hogg, L. (2013). *Applying funds of knowledge in a New Zealand high school: The emergence of team-based collaboration as an approach* [Doctoral dissertation, Victoria University of Wellington]. Research Direct. <http://researcharchive.vuw.ac.nz/handle/10063/3059>
- Hughes, M., & Pollard, A. (2006). Home-school knowledge exchange in context. *Educational Review*, 58(4), 385-395.
- Huynh, T. N. H. (2015). *Teachers' perceptions of child-centred education and its potential in supporting Jrai ethnic minority primary students in Gia Lai, Viet Nam* [Doctoral dissertation, Southern Cross University]. Research Direct. <https://epubs.scu.edu.au/theses/493/>

Jones, N., Presler-Marshall, E., & Tran, T. V. A. (2016). Individual empowerment is not enough: Using a social norms lens to understand the limited educational uptake of Vietnam's HMông girls. *Policy Futures in Education*, 14(5), 539-555.

Jovés, P., Siqués, C., & Esteban-Guitart, M. (2015). The incorporation of funds of knowledge and funds of identity of students and their families into educational practice. A case study from Catalonia, Spain. *Teaching and Teacher Education*, 49, 68-77.

Kalof, L., Dan, A., & Dietz, T. (2008). *Essentials of social research*. McGraw-Hill Education.

Kuckartz, U. (2014). *Qualitative text analysis: A guide to methods, practice and using software*. Sage.

Kumar, R. (2014). *Research methodology: A step-by-step guide for beginners* (4th ed.). Sage.

Lavoie, C. (2011). The educational realities of HMông communities in Vietnam: The voices of teachers. *Critical Inquiry in Language Studies*, 8(2), 153-175.

Lavoie, C., & Benson, C. (2011). Drawing-voice as a methodological tool for understanding teachers' concerns in a pilot HMông-Vietnamese bilingual education programme in Vietnam. *Language, Culture and Curriculum*, 24(3), 269-286.

Le, T. D., Nguyen, T. T. H., & Jooren, I. (2016). *Inequality in educational opportunities and outcomes: Evidence from Young Lives data in Vietnam*. Young Lives. <https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-CountryReport-Vietnam.pdf>

Lee, S. (2019). Traditionally transnational: Cultural continuity and change in H'Mông shamanism across the diaspora. *Ethnography*, 0(0), 1-19. DOI: 10.1177/1466138119839086

Liamputtong, P. (2010). *Performing qualitative cross-cultural research*. Cambridge University Press.

Licona, M. M. (2013). Mexican and Mexican-American children's funds of knowledge as interventions into deficit thinking: Opportunities for praxis in science education. *Cultural Studies of Science Education*, 8(4), 859-872.

Llopart, M., & Esteban-Guitart, M. (2017). Strategies and resources for contextualising the curriculum based on the funds of knowledge approach: A literature review. *The Australian Educational Researcher*, 44(3), 255-274.

Llopart, M., & Esteban-Guitart, M. (2018). Funds of knowledge in 21st century societies: Inclusive educational practices for under-represented students. A literature review. *Journal of Curriculum Studies*, 50(2), 145-161.

- London, J. D. (2011). *Education in Vietnam*. Institute of Southeast Asian Studies.
- Luong, M. P. (2015). *Enhancing Cultural Competence in Teaching-an Intervention to Secure the Right to Quality Education of Minorities: A Case Study of the HMông in Vietnam* [Doctoral dissertation, Rostock University]. Research Direct. http://rosdok.uni-rostock.de/file/rosdok_disshab_0000001550/rosdok_derivate_0000034459/Dissertation_Luong_2016.pdf
- Luong, M. P., & Nieke, W. (2013). Minority status and schooling of the HMông in Vietnam. *HMông Studies Journal*, 14, 1-37.
- Luong, M. P., & Nieke, W. (2014). Conceptualizing quality education from the paradigm of recognition. *Journal of Education and Practice*, 5(18), 178-191.
- Luu, T. T. S. (2008). My teacher will punish that person right away: Cham and Khmer children in Vietnam. In E. Alerby & J. Brown (Eds.), *Voices from the margins: School experiences of refugee, migrant and indigenous children* (pp. 145-161). Brill Sense.
- Lyons, G. (2016). Language: Another cause of publication bias. *European Journal of Anaesthesiology*, 33(9), 620–621.
- Mantei, J. & Kervin, L. (2014). Interpreting the images in a picture book: Students make connections to themselves, their lives and experiences. *English Teaching: Practice and Critique*, 13(2), 76-92.

- Marshall, E., & Toohey, K. (2010). Representing family: Community funds of knowledge, bilingualism, and multimodality. *Harvard Educational Review*, 80(2), 221-242.
- Marshall, M. (1996). Sampling for qualitative research. *Family Practice*, 13(6), 522-526.
- McLaughlin, D. S., & Calabrese Barton, A. (2013). Preservice teachers' uptake and understanding of funds of knowledge in elementary science. *Journal of Science Teacher Education*, 24(1), 13-36.
- Messing, J. (2005). Social reconstructions of schooling: Teacher evaluations of what they learned from participation in the funds of knowledge project. In N. González, L. Moll & C. Amanti (Eds.), *Funds of knowledge: Theorizing practices in households, communities and classrooms* (pp. 183-194). Lawrence Erlbaum.
- Michaud, J. (2012). Hông infrapolitics: A view from Vietnam. *Ethnic and Racial Studies*, 35(11), 1853-1873.
- Ministry of Education and Training (MOET). (2014). *Vietnam education for all national review 2015*. <https://unesdoc.unesco.org/ark:/48223/pf0000232770>
- Ministry of Education and Training. (2005). *Vietnam Education Law 2005*. MOET.

Moje, E. B., Ciechanowski, K. M. I., Kramer, K., Ellis, L., Carrillo, R., & Collazo, T. (2004).

Working toward third space in content area literacy: An examination of everyday funds of knowledge and discourse. *Reading Research Quarterly*, 39(1), 38-70.

Moll, L. C. (2000). Inspired by Vygotsky: Ethnographic experiments in education. In C. D. Lee & P. Smagorinsky (Eds.), *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry* (pp. 256-268). Cambridge University Press.

Moll, L. C. (2005). Reflections and possibilities. In N. González, L. C. Moll & C. Amanti (Eds.), *Funds of knowledge: Theorizing practices in households, communities, and classrooms* (pp. 275–288). Erlbaum Associates.

Moll, L. C. (2014). *L.S. Vygotsky and education*. Routledge.

Moll, L. C., & Greenberg, J. B. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L. C. Moll (Ed.), *Vygotsky and education: Instructional implications and applications of sociohistorical psychology* (pp. 319-348). Cambridge University Press.

Moll, L. C., Amanti, C., Neff, D., & González, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132–141.

- Moll, L. C., Soto-Santiago, S., & Schwartz, L. (2013). Funds of knowledge in changing communities. In K. Hall, T. Cremin, B. Comber, & L. C. Moll (Eds.), *International handbook of research on children's literacy, learning, and culture* (pp. 172-183). Wiley-Blackwell.
- Moll, L. C., Velez-Ibanez, C., Greenberg, J., Andrade, R., Dworin, J., Fly, D., Saavedra, E., Tapia, J., Whitmore, K. (1990). *Community knowledge and classroom practice: Combining resources for literacy instruction: Technical report*. University of Arizona College of Education and Bureau of Applied Research in Anthropology.
- Moll, L. C., Velez-Ibanez, C., & Greenberg, J. B. (1989). *Year one progress report: Community knowledge and classroom practice: Combining resources for literacy instruction (IARP Subcontract No. L-10)*. University of Arizona, College of Education and Bureau of Applied Research in Anthropology.
- Morrison, K. A., Robbins, H. H., & Rose, D. G. (2008). Operationalizing culturally relevant pedagogy: A synthesis of classroom-based research. *Equity & Excellence in Education*, 41(4), 433-452.
- Mudavanhu, Y. (2017). Quality of literature review and discussion of findings in selected papers on integration of ICT in teaching, role of mentors, and teaching science through Science, Technology, Engineering, and Mathematics (STEM). *Educational Research and Reviews*, 12(4), 189-201.

- Mulimani, P. (2019). Publication bias towards Western populations harms humanity. *Nature Human Behaviour*, 3(10), 1026-1027.
- Ngo, T. T. T. (2010). Ethnic and transnational dimensions of recent Protestant conversion among the HMông in northern Vietnam. *Social Compass*, 57(3), 332-344.
- Ngo, V. T. H., Meijer, M. R., Bulte, A. M. W., & Pilot, A. (2015). The implementation of a social constructivist approach in primary science education in Confucian heritage culture: The case of Vietnam. *Cultural Studies of Science Education*, 10(3), 665-693.
- Nguyen, T. T. T., & Hamid, M. O. (2016). Language attitudes, identity and L1 maintenance: A qualitative study of Vietnamese ethnic minority students. *System*, 61, 87-97.
- Nguyen, T. T. T., & Hamid, M. O. (2018). Bilingualism as a resource: Language attitudes of Vietnamese ethnic minority students. *Current Issues in Language Planning*, 19(4), 343-362.
- Nguyen, T. T. T. (2019). Vietnamese ethnic minority students' language practices under the influence of external interventions: A management perspective. *Language in Society*, 48(5), 745-767.
- Nguyen, T. T. T., & Hamid, M. O. (2017). Subtractive schooling and identity: A case study of ethnic minority students in Vietnam. *Journal of Language, Identity & Education*, 16(3), 142-156.

- Nguyen, V. P. (2009, March 24-26). *What education for the ethnic minorities of Viet Nam? Preschooling as a pattern of social integration*. [Paper presentation]. UNESCO-APEID International Conference, Bangkok, Thailand.
<http://www.ugakugei.ac.jp/~shinohar/news/kokusai/unesccon/prog09>
- Nightingale, A. W. (2004). *Spectacles of truth in classical Greek philosophy: Theoria in its cultural context*. Cambridge University Press.
- Ó Briain, L. (2012). *HMông music in northern Vietnam: identity, tradition and modernity* [Doctoral dissertation, University of Sheffield]. Research Direct.
http://etheses.whiterose.ac.uk/2395/1/Ó_Briain,_Lonán.pdf
- Oughton, H. (2010). Funds of knowledge - a conceptual critique. *Studies in the Education of Adults*, 42(1), 63-78.
- Palaiologou, I., Needham, D., & Male, T. (2016). *Doing research in education: Theory and practice*. SAGE.
- Palaiologou, N., & Dietz, G. (2012). *Mapping the broad field of multicultural and intercultural education worldwide: Towards the development of a new citizen*. Cambridge Scholars.
- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Sage.

- Petrone, R. (2013). Linking contemporary research on young, literacy, and popular culture with literacy teacher education. *Journal of Literacy Research*, 45(3), 240–266.
- Pham, L. H., & Fry, G. W. (2011). Viet Nam as an outlier: Tradition and change in education. In C. Brock & L. P. Symaco (Eds.), *Education in South-East Asia* (pp. 221-243). Symposium Books.
- Pham, T. S., Do, T. H., Le, K. H., Luu, N. Q., Le, V. S., Ferrer, A. J., Bui, T. Y. & Sebastian, L. S. (2015). *Situation Analysis and Needs Assessment Report for Ma Village and Yan Bai Province, Vietnam*. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
https://cgspace.cgiar.org/bitstream/handle/10568/72437/Ma%20Village_SANA.pdf?sequence=1&isAllowed=y
- Phan, L. H., Vu, H. H., & Dat, B. (2014). Language policies in modern-day Vietnam: Changes, challenges, and complexities. In P. Sercombe & R. Tupas (Eds.), *Language, education, and nation- building: Assimilation and shift in Southeast Asia* (pp. 232–244). Palgrave Macmillan.
- Phelps, R., Graham, A., Ha, T. T. N., & Geeves, R. (2014). Exploring Vietnamese children's experiences of, and views on, learning at primary school in rural and remote communities. *International Journal of Educational Development*, 36, 33-43.

Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education* (2nd ed.). Sage.

Karlidag-Dennis, E., Hazenberg, R., & Dinh, A.T (2020). Is education for all? The experiences of ethnic minority students and teachers in North-western Vietnam engaging with social entrepreneurship. *International Journal of Educational Development*, 77, 1-9.

Rheinländer, T., Samuelsen, H., Dalsgaard, A., & Konradsen, F. (2015). Teaching minority children hygiene: Investigating hygiene education in kindergartens and homes of ethnic minority children in northern Vietnam. *Ethnicity & Health*, 20(3), 258-272.

Riojas-Cortez, M., & Flores, B. B. (2009). Sin olvidar a los padres: Families collaborating within school and university partnerships. *Journal of Latinos and Education*, 8(3), 231-239.

Rios-Aguilar, C. (2010). Measuring funds of knowledge: Contributions to Latina/o students' academic and non-academic outcomes. *Teachers College Record*, 112(8), 2209-2257.

Rios-Aguilar, C., Kiyama, J., Gravitt, M., & Moll, L. C. (2011). Funds of knowledge for the poor and forms of capital for the rich? A capital approach to examining funds of knowledge. *Theory and Research in Education*, 9(2), 163-184.

- Rodriguez, G. (2013). Power and agency in education: Exploring the pedagogical dimensions of funds of knowledge. *Review of Research in Education*, 37(1), 87-120.
- Ropovik, I., Adamkovic, M., & Greger, D. (2019). Neglect of publication bias compromises meta-analyses of educational research. *MetaArXiv*, 1-28.
- Rowell, J. (2006). *Family literacy experiences: Creating reading and writing opportunities that support classroom learning*. Stenhouse.
- Saravia-Shore, M., & Garcia, E. (2008). Diverse teaching strategies for diverse learners. In R. Cole (Ed.), *Educating everybody's children: Diverse teaching strategies for diverse learners* (pp. 41-97). ASCD.
- Saubich, X., & Esteban-Guitart, M. (2011). Bringing funds of family knowledge to school. The living Morocco project. *Multidisciplinary Journal of Educational Research*, 1(1), 79-103.
- Schleicher, A. (2012). *Preparing teachers and developing school leaders for the 21st century: Lessons from around the World*. OECD.
- Schumacher, R. (2016). *Using funds of knowledge to design inquiry based Science lessons* [Doctoral dissertation, State University of New York College]. Research Direct. <https://dspace.sunyconnect.suny.edu/handle/1951/70406>
- Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education*

and the social sciences (4th ed.). Teacher College Press.

Singh, M. (in press). Researching multilingually through postmonolingual theorizing.

Sugarman, S. (2010). Seeing past the fences: Finding funds of knowledge for ethical teaching. *The New Educator*, 6(2), 96-117.

Tarnopolsky, O. (2012). *Constructivist blended learning approach: To teaching English for specific purposes*. Versita.

Templeton, B. (2013). "Why Is That Child So Rude". *Educational Leadership*, 70(8), 72-74.

Thomson, P., & Hall, C. (2008). Opportunities missed and/or thwarted? 'Funds of knowledge' meet the English national curriculum. *The Curriculum Journal*, 19(2), 87-103.

To, Hoai. (1952). *Vợ chồng A Phủ* [*The A Phủs*]. Nhà xuất bản Văn Học.

Tran, N. M. T., & Pasquier-Doumer, L. (2015). Does full-day schooling reduce educational inequality in Vietnam?. *Open Society Foundations*, 72, 1-62.

Tran, N. M. T., & Pasquier-Doumer, L. (2019). Full-day schooling and educational inequality in Vietnam. *The Journal of Development Studies*, 55(5), 786-804.

- Tran, N. T. (2013). Factors associated with low educational motivation among ethnic minority students in Vietnam. *Ritsumeikan Journal of Asia Pacific Studies*, 32, 124-136.
- Tran, T. B. L. (2014). Full day schooling performance of primary schools in disadvantaged areas in Vietnam: A comparative case study. *VNU Journal of Science*, 30(4), 17-30.
- Trieu, Q., & Jayakody, R. (2019). Ethnic minority educational success: Understanding accomplishments in challenging settings. *Social Indicators Research*, 145(2), 663-701.
- Truong, H. C. (2009). *Schooling as lived and told: Contrasting impacts of education policies for ethnic minority children in Viet Nam seen from Young lives surveys. (Background paper prepared for the Education for All Global Monitoring Report 2010 Reaching the marginalized)*. UNESCO.
<https://assets.publishing.service.gov.uk/media/57a08b79e5274a27b2000b77/SchoolingaSLivedandTold.pdf>
- Truong, H. C. (2011a). *Eliminating inter-ethnic inequalities? Assessing impacts of education policies on ethnic minority children in Vietnam*. Young Lives.
<https://ora.ox.ac.uk/objects/uuid:155ecf7d-da6f-4b50-b1d9-9dfb94c3b227>
- Truong, H. C. (2011b). They think we don't value schooling: Paradoxes of education in the multi-ethnic central highland of Vietnam. In J. D. London (Ed.), *Education in Viet Nam* (pp. 171-211). Institute of Southeast Asian Studies.

- Tsukui, A., Saito, E., Sato, M., Michiyama, M., & Murase, M. (2017). The classroom observations of Vietnamese teachers: Mediating underlying values to understand student learning. *Teachers and Teaching*, 23(6), 689-703.
- Turner, E. E., & Drake, C. (2016). A review of research on prospective teachers' learning about children's mathematical thinking and cultural funds of knowledge. *Journal of Teacher Education*, 67(1), 32-46.
- Turner, E. E., Drake, C., McDuffie, A. R., Aguirre, J., Bartell, T. G., & Foote, M. Q. (2012). Promoting equity in mathematics teacher preparation: A framework for advancing teacher learning of children's multiple mathematics knowledge bases. *Journal of Mathematics Teacher Education*, 15(1), 67-82.
- Turner, S. (2007). Trading old textiles: The selective diversification of highland livelihoods in northern Vietnam. *Human Organization*, 66(4), 389-404.
- Turner, S. (2012a). "Forever H'Mông": Ethnic minority livelihoods and agrarian transition in upland Northern Vietnam. *The Professional Geographer*, 64(4), 540-553.
- Turner, S. (2012b). Making a living the H'Mông way: An actor-oriented livelihoods approach to everyday politics and resistance in upland Vietnam. *Annals of the Association of American Geographers*, 102(2), 403-422.

Turner, S., & Michaud, J. (2008). Imaginative and adaptive economic strategies for H'Mông livelihoods in Lào Cai province, northern Vietnam. *Journal of Vietnamese Studies*, 3(3), 158-190.

UNESCO. (2011). *The cultural diversity programming lens: A practical tool to integrate culture in development - pedagogical guide*. UNESCO.
<http://www.unesco.org/new/en/culture/themes/culture-and-development/the-cultural-diversitylens/>

UNESCO. (2012). *World data on education*. UNESCO.
http://www.ibe.unesco.org/sites/default/files/Viet_Nam.pdf

UNFPA. (2012). *Ethnic groups in Vietnam: An analysis of key indicators from the 2009 Vietnam population and housing census*. UNFPA.
https://vietnam.unfpa.org/sites/default/files/pub-pdf/Ethnic_Group_ENG.pdf

UNICEF & MOET. (2010). *Action research on mother tongue-based bilingual education: Creating learning opportunities for ethnic minority children*. UNICEF.
https://www.enspired.net/sites/default/files/uploadedfiles/mtbbe_vn_unicef_2010_programme-brief.pdf

UNICEF & MOET. (2011). *Action research on mother-tongue-based bilingual education: Achieving quality, equitable education* [L¹SEP] (program brief). UNICEF.

https://www.enspired.net/sites/default/files/uploadedfiles/mtbbe_vn_unicef_2011_programme-brief.pdf

UNICEF & MOET. (2012). *Action Research on Mother Tongue-Based Bilingual Education: Improving the equity and quality of education for ethnic minority children in Viet Nam*. UNICEF.

https://www.enspired.net/sites/default/files/uploadedfiles/mtbbe_vn_unicef_2012_programme-brief.pdf

UNICEF & MOET. (2013). *Out-of-school children in Viet Nam: A country study*. UNICEF.
<https://unesdoc.unesco.org/ark:/48223/pf0000234310>

UNICEF, UNESCO & MOET. (2008). *The transition of ethnic minority girls from primary to secondary education*. MOET, United Nations Children Fund, and United Nations Educational, Scientific and Cultural Organization.
http://www.miskewitt.com/assets/transition_study.pdf

UNICEF. (2010). *An analysis of the situation of children in Viet Nam 2010*. UNICEF.
https://www.unicef.org/sitan/files/SitAn-Viet_Nam_2010_Eng.pdf

UNICEF. (2012). Lao Cai primary classroom language profile. UNICEF, Lao Cai DOET, MOET & SIL International.
http://www.unicef.org/vietnam/Lao_Cai_mapping_profile_set.pdf

- UNICEF. (2015). *Evaluation of Unicef-supported Moet's initiative of mother tongue based bilingual education in Viet Nam 2006 - 2014*. UNICEF.
https://www.unicef.org/evaldatabase/files/UNICEF_VN_MTBBE_Final_Evaluation_Report_Vietnam_2015-031.pdf
- UNICEF. (2016). *Report on situation analysis of children in Lao Cai*. UNICEF.
<https://www.unicef.org/vietnam/reports/report-situation-analysis-children-lao-cai>
- UNICEF. (2018). *The 2016 report on out-of-school children: Viet Nam country study*. UNICEF.
<https://www.unicef.org/vietnam/media/2686/file/Executive%20summary%20-%20Out-of-school-children-report-2016.pdf>
- Upadhyay, B. R. (2005). Using students' lived experiences in an urban science classroom: An elementary school teachers' thinking. *Science Education*, 90(1), 94-110.
- Upadhyay, B. R. (2009). Teaching science for empowerment in an urban classroom: A case study of a HMông teacher. *Equity & Excellence in Education*, 42(2), 217-232.
- Varelas, M., & Pappas, C. C. (2006). Intertextuality in read-alouds of integrated science-literacy units in urban primary classrooms: Opportunities for the development of thought and language. *Cognition and Instruction*, 24(2), 211-259.^[1]_{SEP}

Velez-Ibanez, C. G. (1988). Networks of exchange among Mexicans in the U.S. and Mexico: Local level mediating responses to national and international trans-formations. *Urban Anthropology*, 17(1), 27-51. [SEP]

Vieluf, S., Kaplan, D., Klieme, E., Bayer, S. (2012). *Teaching practices and pedagogical innovations: Evidence from TALIS*. OECD. <https://doi.org/10.1787/9789264123540-en>.

Vincent, C. (1995). School, community, and ethnic minority parents. In S. Tomlinson & M. Craft (Eds.), *Ethnic relations and schooling: Policy and practice in the 1990s* (pp. 174-190). The Athlone Press.

Vu, T. T. H. (2014). Ethnic minority children's and adults' perceptions and experiences of schooling in Vietnam: A case study of the Cham H'Roi. In M. Bourdillon & J. Boyden (Eds.), *Growing up in poverty findings from young lives* (pp. 225-244). Palgrave Macmillan.

Wager, A. A. (2012). Incorporating out-of-school mathematics: From cultural context to embedded practice. *Journal of Mathematics Teacher Education*, 15(1), 9-23.

Wolf, E. (1966) *Peasants*. Prentice Hall.

Woodside, A. (1983). The triumphs and failures of mass education in Viet Nam. *Pacific Affairs*, 56(3), 401-427.

World Bank & MOET (2009). *Ethnic minority plan - School education quality Project*. World Bank.

<http://documents.worldbank.org/curated/en/574571468130208185/pdf/IPP3360v30Ethn1h131final0Box0338876.pdf>

World Bank. (2011). *Viet Nam-High quality education for all by 2020: Overview/report (English)*. World Bank.

<http://documents.worldbank.org/curated/en/416151468320084130/pdf/680920v10WP0P10oduc0tap10Engl012012.pdf>

World Bank. (2013, September 04). *Vietnam: Personalized lessons keep children from ethnic minorities in school*. World Bank News.

<https://www.worldbank.org/en/news/feature/2013/09/04/vietnam-personalised-lessons-keep-children-from-ethnic-minorities-in-school>

World Bank. (2014). *Report on social assessment & proposed bias avoidance framework for development of curriculum and teaching materials for vulnerable children*. World Bank.

<http://documents.worldbank.org/curated/en/718061468334301767/pdf/SR690SR0P150050Box385425B00PUBLIC0.pdf>

World Bank. (2017). *Implementation completion and results report (IDA-46080) on a credit in the amount of SDR 85.4 million (US\$127 million equivalent) to the socialist republic of Viet Nam for a school education quality assurance program*. World Bank.

<http://documents.worldbank.org/curated/en/531511498478745258/pdf/ICR00004103-06232017.pdf>

Yen Bai Statistics Department. (2016). *A report on socio-economic situation*. Yen Bai, Viet Nam: Yen Bai Statistics Department.

Yen Bai Statistics Department. (2017). *A report on socio-economic situation*. Yen Bai, Viet Nam: Yen Bai Statistics Department.

Yen Bai Statistics Department. (2018). *A report on socio-economic situation*. Yen Bai, Viet Nam: Yen Bai Statistics Department.

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.

Young, E. (2010). Challenges to conceptualizing and actualizing culturally relevant pedagogy: How viable is the theory in classroom practice? *Journal of Teacher Education*, 61(3), 248-260.

Zipin, L. (2009). Dark funds of knowledge, deep funds of pedagogy: Exploring boundaries between life worlds and schools. *Discourse: Studies in the Cultural Politics of Education*, 30(3), 317-331.

Zipin, L., Sellar, S., & Hattam, R. (2012). Countering and exceeding 'capital': A 'funds of knowledge' approach to reimagining community. *Studies in the Cultural Politics of Education*, 33(2), 179-192.

Zipin, L., Sellar, S., Brennan, M., & Gale, T. (2015). Educating for futures in marginalized regions: A sociological framework for rethinking and researching aspirations. *Educational Philosophy and Theory*, 47(3), 227-246.